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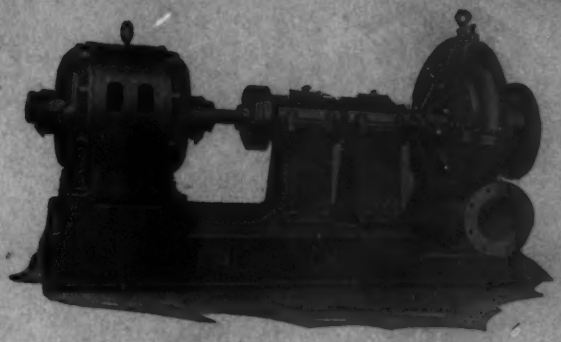

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FOR PAPER

PAPER TRADE JOURNAL

ESTABLISHED 1872

THE INTERNATIONAL WEEKLY OF THE PAPER AND PULP INDUSTRY AND THE PIONEER PUBLICATION IN ITS FIELD

FIFTY-THIRD YEAR

Published Every Thursday by the

LOCKWOOD TRADE JOURNAL CO., INC.

LESLIE R. PALMER, PRESIDENT — GEO. S. MACDONALD, VICE-PRESIDENT & TREAS. — F. K. HOPPIE, SECRETARY

10 EAST 39TH ST. N.Y. U. S. A

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Analysis

Moisture	2.04%
Combined Water	12.91%
Silica and Insoluble	46.21%
Oxide of Iron	.51%
Oxide of Aluminum	38.03%
Magnesium Oxide	.30%
	100.00
Grit	.18%

McNAMEE CLAY

Analysis

Moisture	.80%
Combined Water	13.74%
Silica and Insoluble	44.81%
Oxide of Iron	.17%
Oxide of Aluminum	40.06%
Magnesium Oxide	.42%
	100.00
Grit	.15%

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Because their quality is superior in some respects

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Check the above analyses with any others

Compare the clays

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Investigate our supply of clay and our plants

And the reliable service

And the shipments in 30 ton car lots

And the small storage reserves necessary for you to carry

And we think you also will be convinced.

ESTABLISHED IN 1872

PAPER TRADE JOURNAL

With Which Is Combined

PAPER

The Magazine of the Paper Industry

Vol. LXXXI. No. 2 Thursday, July 9, 1925

Standard News Print Defined by Treasury Department

After Long Investigation New Definition is Announced and Will be Incorporated Under the Tariff Act In Amended Regulations to Take Effect in Thirty Days—Is Designed to Close Loop-Holes Against Free Entry of Certain Papers While Smoothing the Road for Entry of the Paper Entitled to be Imported Without Tariff Charge

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., July 8, 1925.—Secretary of the Treasury Mellon has signed the new definition for standard news print paper and the former definition which was known as T. D. 39778 has been revoked. The new definition is "applicable to all paper imported within 30 days after the date of publication of these instructions in the weekly Treasury Decisions."

As is well known in the trade the new definition is the result of protests made some months ago by domestic news print manufacturers which protests were followed by two hearings held in Washington. Two of the points on which the domestic manufacturers laid great stress have been granted by the Treasury Department and these include limiting sulphite to unbleached, and also limiting the ash content to two per cent. The domestic manufacturers however asked that free news print paper be allowed to come into the United States only when consigned to newspapers upon proof being presented. The Department has refused to allow this but states that there shall be no delay in delivery "of such paper when consigned to newspapers, agents of newspapers, or those dealers whose business it is to furnish such paper to newspapers. However, individuals who are not known to be furnishing paper to newspapers should be carefully examined and if deemed necessary samples taken for analyses for the purpose of determining its proper classification."

Secretary Mellon's Letter

The decision is contained in a letter signed by Secretary Mellon and addressed to the Collector of Customs at New York. Because of the great interest which has been evidenced in this case we give herewith the complete letter as follows:

"The Department refers to your letter of March 14, 1925, relative to the definition of standard news print paper proposed as a substitute for that embodied in T. D. 39778.

"With your letter you inclosed a report from the Appraiser at your port dated March 10, 1925, in which he submits a summary of the results of certain tests made of representative samples of paper ordinarily used by newspapers in this country in printing their regular editions. It appears from this summary that the weight of the paper tested varied from 30 to 35 pounds per ream of 500 sheets 24 x 36 inches and that the fiber content consisted of from 75 per cent to 80 per cent of mechanically ground wood pulp and from 20 to 25 per cent of unbleached sulphite.

"The Department has given careful consideration to the question whether its original decision T. D. 39778, should be modified or revoked, and two separate hearings were recently held at the Department upon the subject which were attended by representatives of the American Paper Industry, the American Newspaper Publishers Association, and other interests. In addition a number of briefs and letters have been submitted to the Department upon the subject.

"The domestic interests take exception to the Department's definition in T. D. 39778 because under the said definition newsprint paper may be imported produced from bleached mechanically ground wood pulp and bleached sulphite, and further because news print paper may be sized and loaded with clay to an extent to which it makes it available for other uses than in the printing of newspapers and yet fall within the definition embodied in T. D. 39778, whereas those representing the importing interests submit data in support of their position that the fact that the paper is sized or loaded with a filler of clay should not exclude it from free entry under paragraph 1672 of the tariff act, and the American Newspaper Publishers Association submitted to the Department analyses of paper, most of which was imported from Sweden and Germany, used in the regular editions of some of the leading newspapers of New York City showing an ash content of from .40 per cent to 7.70 per cent. However, the Department deems it proper to call attention to the fact that the quantity of news print imported from the countries mentioned is negligible compared with the total quantity used by the newspapers in this country and, therefore, the result of the tests made for the American Newspaper Publishers Association does not necessarily indicate that they represent the amount of filler ordinarily used in news print paper.

"The Appraiser at your port also submitted results of tests made by his office of news print paper produced in 17 different mills in Canada and the United States as follows: ash content from .2 per cent to 1.0 per cent. The Department is accordingly of the opinion that limiting the ash content to not in excess of 2 per cent is fair and will not result in excluding paper of the kind used by newspapers from free entry.

"The Appraiser also reported that the tests made disclosed that the paper was made from mechanically ground wood pulp and unbleached sulphite, none of the samples containing any bleached fibers, which supports the contention of the domestic interests that bleached sulphite is not used in the manufacture of paper used by newspapers in getting out their regular edition.

"Referring to the criticism of the Appraiser that the proposed definition provides only for the free entry of standard news print

paper when imported in rolls, I have to advise you that the Department has before it a tabulated statement of papers published throughout the United States using paper in sheet form of the same character as that when imported in rolls and that paper in sheets as small as 22 x 30 inches is in general use.

"The Appraiser reports that tests of news print paper made by his office showed, in respect to the degree of sizing, when tested by the Curl method, that the maximum period for transudation of water was 3 seconds and by the Ground Glass method 5 seconds. The Department is accordingly of the opinion that the limit of 10 seconds by the Ground Glass method in the proposed definition is fair to all concerned. If the Valley size test method is employed or the Curl methods the maximum allowance of time should be 5 seconds.

"In view of the foregoing the Department is of the opinion that its original ruling T. D. 39778 should be revoked and that there should be substituted therefor the following:

"The term 'standard news print paper' as used in paragraph 1672 of the tariff act of 1922 shall conform to the following specifications:

Weight—500 sheets, each 24 x 36 inches, shall weigh not less than 30 pounds nor more than 35 pounds.

Rolls—The paper shall be in rolls not less than 16 inches wide and 28 inches in diameter. Sheets 20 x 30 inches.

Stock—Not less than 70 per cent of the total fiber shall be ground wood; the remainder shall be unbleached sulphite.

Finish—The average of 5 tests in machine direction and 5 tests in cross direction on both sides moving the paper after each test, made with the Ingersoll Glarimeter, shall be not more than 50 per cent gloss.

Ash—Shall be not more than 2 percent.

Degree of Sizing—Time of transudation of water shall be not more than 10 seconds by the Ground Glass method or 5 seconds by the alternate methods.

"The tests for the degree of sizing by the methods above referred to shall be as follows:

Ground Glass Method

"Cut the specimen of the sample to be tested about 6 inches square; fold into a box-shape about 2 inches square and 2 inches high, open at the top, the tabs formed by folding being held by paper-clips. Place the box-shaped specimen on the ground surface of a piece of ground glass lying on a dark surface. Partially fill with water at 25 degrees, ± 1 degree C. After 10 seconds lift the box shaped specimen and observe the ground glass underneath. If water has penetrated through the specimen it will show on the ground glass as dark spots or streaks which quickly disappear by evaporation. The methods is described in the PAPER TRADE JOURNAL, September 4, 1924, page 49.

Valley Size Tester

By the Customary method of using this apparatus

Curl Method

"Provide a vessel of at least two quarts capacity and fill with water at 20 degrees, ± 1 degree C. The larger the vessel the easier it is to hold the temperature constant. Cut the specimen of the sample to be tested in the shape of a right triangle, one leg of which should be about 2 inches long and in the machine direction of the paper; and the other leg about 3 inches long. Make a crease parallel with and about half or three quarters of an inch from the shorter leg of the triangular specimen, so that one part of the specimen makes an angle with the remainder. Holding the specimen in one hand by the point opposite the shorter leg, place it on the surface of the water so that the shorter leg is against one side of the vessel, in which position it will remain more steady than if placed in the center of the vessel. Start a stop-watch simultaneously with this operation. The specimen curls and the longer dry portion serves as a pointer as it moves across the field of vision. When the curling in the initial direction ceases and the instant the specimen starts to uncurl the stop-watch is stopped and the time recorded. The test has been described in different forms in the PAPER TRADE JOURNAL of April 6, 1922; and of October 23, 1924.

"Paper not falling within the above definition is not entitled to admission free of duty as standard news print paper under paragraph 1672.

"In view of the fact that sulphite is more valuable than ground wood pulp and the further facts that the standard contract between newspaper manufacturers and publishers contains no requirement as to the sulphite content it is obvious that paper manufacturers will not put an amount of sulphite in paper in excess of that necessary for furnishing a paper acceptable to the newspapers. Accordingly the Department does not deem it necessary that samples shall be taken from every importation of paper claimed to be standard news print paper, and therefore unless there are circumstances connected with a particular importation or an inspection of the same raises the question whether the paper is within the limits of the above definition no sample should be taken and there should be no delay in the delivery of such paper when consigned to newspapers, agents of newspapers, or those dealers whose business it is to furnish such paper to newspapers. However, paper invoiced or entered as standard news print paper consigned to firms or individuals who are not known to be furnishing paper to newspapers should be carefully examined and if deemed necessary samples taken for analyses for the purpose of determining its proper classification.

"The foregoing instructions should be applicable to all paper imported 30 days after the date of the publication of these instructions in the weekly Treasury Decisions."

American Writing May Make Assessment

Under a plan of reorganization which has been agreed upon by committees representing bondholders and stockholders of the American Writing Paper Company, preferred shareholders will be assessed $10 a share and common shareholders $5 a share.

Each holder of 100 shares of preferred stock will receive $500 par value in new preferred and 50 shares of new common stock, and each holder of 100 shares of common will receive $250 in new bonds with 2½ shares of new perferred and 25 shares of common stock.

Each holder of a $1,000 bond will receive $500 in a new issue of first mortgage bonds and $500 plus unpaid coupons in new preferred stock. The new preferred stock will be cumulative and entitled to 7 per cent annually in dividends.

It is pointed out by interests in close touch with the reorganization that the above plan, although tentatively agreed upon, may have to be modified in some respects before finally approved.

Fairfield Paper Co. Reconstructing Power Plants

BALTIMORE, Ohio, July 6, 1925.—The Fairfield Paper Company, is reconstructing one of its present power plant and bringing it up to date in all particulars.

The rejuvination of the plant consists of the removal of the present four 150 H.P. tubular boilers, hand fired, and replacing them with two 312 H.P. Stirling Boilers. In connection with the new boilers two Detroit Multiple Retort Stokers, having five retorts each have been purchased. This is the second Detroit Stoker installation, the first one in 1921 consisting of three Detroit Single Retort Underfeed Stokers.

The auxiliaries include a Buffalo Forge Fan, direct connected to a 20 H.P. Variable Speed Motor and each stoker is to be motor driven. The plant is to be modernized in every detail, with a coal and ash handling system, and the ashes are to be removed at the rear underneath the Stirling Boiler Drums.

Paper Securities Inactive on Montreal Exchange

Belgo Canadian's Announcement of New Price on News Print Makes Trading Less Lively—How Montreal Gazette Explains President Biermans's Statement—Kenogmi Dam Undertaking Nearing Completion Frank J. D. Barnjum Elected Legislative Member—Stumpage Rates Subjected to Cut

[FROM OUR REGULAR CORRESPONDENT]

MONTREL, Que., July 6, 1925.—There has been marked inaction in paper securities on the Montreal Stock Exchange since President Biermans, of the Belgo Canadian Paper Company announced that his company's price for news print, starting with January, 1926, would be $65 per ton. Meanwhile various attempts are being made to explain Mr. Biermans' statement. For instance the Montreal Gazette says: "To arrive at a reason for Mr. Biermans' action, it might be interesting to remember that in a published statement some months ago he outlined a plan for the restriction on the exports of wood pulp from this province based on the grounds that preservation was absolutely essential to the industry and to the province.

"Mr. Biermans was accused of a desire to cause an increase in the price of news print to the publishers of the United States, in the publication of the American Newspaper Publishers' Association, and the belief is that to show his sincerity in the matter of preservation, rather than to cause any advance in the price of news print, that Mr. Biermans made the announcement that he would contract with his customers for 1926 at the rate of $65 per ton. He is further understood to have suggested that he would be willing to make an agreement for five years based on a maximum price to be set.

"Thus from the above it might be deduced that the action of Mr. Biermans was the result of other than the actual situation in the news print industry. While the constant expansion in the production of news print in this country has been the cause of much nervousness, it must not be lost sight of that there is reported by the American Newspaper Publishers' Association a constantly growing consumption of news print by the journals of the United States."

Other news print manufacturers have made it clear that they are not prepared to make any statement as to their price for next year, pointing out that many things can transpire in the industry before that date.

Kenogami Dam Nears Completion

According to reports available at the Streams Commission in Quebec, 12,000,000 cubic feet of water are now stored at Lake Kenogami, where damning work has been in progress for the last two years. Engineers are endeavoring to have it completed early in September. Some delay occurred a few months ago when a leak was discovered on one side of the dam, but additional help resulted in quicker progress. The dam when completed will have cost nearly $2,000,000. The depth at the dam is 35 feet. The object is to regulate the flow of the waters so as to permit an all year round operation of the mills of Price Brothers at Kenogami and the Chicoutimi Pulp Mill on the Des Sables river. The building of the water storage plant at Lake Kenogami necessitated the expropriation of the village of St. Cyriac, the residents of which were given lands in other sections of Chicontimi county.

Frank Barnjum Elected

Frank J. D. Barnjum, who has been the leader in the campaign for an absolute embargo on the export of pulpwood, was elected Conservative member of the Legislative for Queen's County, Nova Scotia, in the Provincial General election last week. After his victory he reiterated his pre-election promise that he would build a pulp mill in Nova Scotia, when speaking at declaration proceedings there last week. He said, "I want to say to the people of Nova Scotia that I am going to build a paper mill in Nova Scotia that will provide a market for every cord of wood that is now being exported by the farmers of this province."

Stumpage Rates Cut

Reductions in stumpage rates on lumber cut on Crown lands of New Brunswick are announced in a statement issued by the provincial government. The reductions in the case of spruce, pine, hacamatac and cedar amount to $1 a thousand, the old rate being $4 and the new $5. The reduction in the case of fir is 50 cents from $3 to $2.50. Only in the case of hardwood is an increase shown, the rate changing from $1.25 to $1.50. By far the greater part of the lumber cut in New Brunswick is made up of spruce, pine and fir.

National Container Association to Meet

The next meeting of the National Container Association will be held at the Griswold Hotel, Eastern Point, near New London, Conn., on Tuesday, July 21, and Wednesday, July 22, 1925.

Meetings of the executives and of the sales promotion, standardization, statistical and Mellon Institute committees will be held at The Griswold on Monday, July 20, the day preceding the regular sessions. Notices of these meetings will be sent to Committee members by the respective chairmen.

As an added feature of the meeting, the sales promotion committee has arranged to have the field representatives on hand at the meeting and there will be a special session on Wednesday afternoon, July 22, at which the Sales Promotion representatives will give an outline of their individual activities during the past year and in which they will suggest ways and means for members to follow up the sales promotion work with a view to developing additional new business themselves. Notice of this meeting has already been furnished members by the Chairman of the sales promotion committee, and it is hoped that each member company, in addition to having its principal and alternate attend the meeting, will also arrange for the presence of its sales manager.

The program is being so arranged as to permit sufficient time for recreation. There is an excellent golf course and club house within a short distance of the hotel. There is also a bathing beach within a few minutes' walk from the hotel.

Waldorf Paper Products Co. Employees Insured

ST. PAUL, Minn., July 5, 1925.—The employees of the Waldorf Paper Products Company, have been offered group life insurance by their employer. The contract, which was underwritten by the Metropolitan Life Insurance Company, provides seven hundred workers with life insurance protection totaling $1,000,000.

The insurance was issued on a cooperative basis, employer and employees jointly paying the premiums.

Employees who are now with the company receive individual protection ranging from $1,000 to $5,000, the amount varying according to the salary received. New employees will be eligible for insurance after they have been with the company six months.

Should an employee become completely and permanently incapacitated before age sixty, he will receive the full amount of his insurance in equal monthly installments.

A visiting trained nurse is furnished without cost by the Metropolitan Life to any ill or injured group certificate-holder. The insurance company, also, distributes at regular intervals helpful pamphlets on health subjects and sanitation.

Specialized Lines in Philadelphia Most Active

Review of Past Three Months Shows Those Lines Have Been the Most Profitable—Federal Reserve Report Speaks of Paper Market as "Only Fair"—Trade Relation Committees Meet—Paper Trade Association Holds Interesting Meeting—Sayford Co. Takes New Offices in Drexel Building

[FROM OUR REGULAR CORRESPONDENT]

PHILADELPHIA, Pa., July 6, 1925.—The closing days of the month and the reports of conditions coincident with the semi-annual accounting of business in the various paper houses disclosed the fact that the paper markets of the past three months have been profitable in specialized lines although there has been a fairly well maintained activity generally in the trade throughout the first half of the year. There has been throughout the half year an improved business trend that summarizes general conditions considerably above those of last year at the same period.

Federal Reserve Reports on Paper Trade

In its report on the conditions in the Third or Philadelphia District, the Federal Reserve Bank in its July Bulletin which will be issued this week gives the following survey of the paper trade:—

"The paper market in this district is only fair, though the current demand compares favorably with that of June last year. There is a moderate rate of activity in book, fine, wrapping, news print, wall and kraft papers, although business is somewhat unevenly distributed."

Wholesale Markets as reported by the Federal Reserve Bank are as follows:—

"The demand for such papers as printing, book, fine, kraft, wrapping, tissue and crepe continues fairly active, although May sales of all grades of paper dropped, 4.6 per cent and 5.2 per cent, respectively, below the level of last April and May, 1924."

Paper Trade Association in Session

The bi-monthly meeting of the Philadelphia Paper Trade Association held last Thursday at the Bourse was particularly an occasion for the extension of welcome to the newest of members, James Andrews, as representative of the Schuylkill Paper Company, recently established through the consolidation of the Keystone Paper Company and James Andrews, Inc., both long engaged in the paper distribution business in this city. While the members of the Schuylkill Paper Company, long have been identified with the local paper trade and previously were enrolled in the Association as heads of their own concerns they were newly initiated under the reorganized business title.

The members, after discussing routine matters placed before the Fine Paper Division group their investigations of statistics and contribution of these to the National Association. It was disclosed that 15 members of the local trade were contributors to the National Association of business statistics and that these reports reflected conditions in the local paper business with a fair degree of accuracy. The Chairman of the June gathering and host to the members was Norbert A. Considine, of the Paper House of Pennsylvania who also is Chairman of the Paper Trade Customs Committee.

Trade Relation Committees Meet

Trades Relation Committees of the Philadelphia Typothetæ and the local Paper Trade Association met last Wednesday at luncheon, served in the Restaurant of the Bourse, for the purpose of discussing pending matters of importance to both branches of the Graphic Arts Industries. Among the potent factors of concern to both the paper men and the master printers which were reviewed was the work of the Typothetæ Collection Bureau, which has been extensively developed since its organization a year ago. Steps were taken at this meeting to aid and increase the efficiency of this very valuable section of the Typothetæ organization. It was decided to maintain a constant association and materially fortify the contact between the two organizations for the mutual benefit of both printer and paper men and in order to promote this aim decision was made to institute regular monthly luncheons beginning with the September schedule of meetings. These luncheons will be held regularly on the first Friday of each month. It was decided to discontinue the July and August gatherings because of the absence of many of the members during the vacation days.

In the absence of William Sharpless, Chairman of the Typothetæ Committee, William T. Innes, of the printers association presided. The newly elected President of the Typothetæ, Charles L. Kinsley, was present for the purpose of personally surveying the work of the Committees and also lay before the Paper Trade Association his wishes for a continuance of the present cordial relationship between the two organizatons.

Franklin W. Heath, Executive Secretary of the Typothetæ and S. Clayton Wicks were also present from the Typothetæ, and Norbert A. Considine, Chairman, William Wilcox and Howard Satterthwaite, representing the Paper Trade Association.

New Offices for Sayford Co.

Larger offices have been acquired by the Frank M. Sayford Company and its allied concern, the Sayford Specialty Company, in the Drexel Building, where formerly the firms occupied the third floor of the building in Room 371. During the last week the offices were removed to the 6th floor of the building where Suite 669 has been leased as the local headquarters. The Philadelphia branch is under the management of Philip J. McCoy, who will make his headquarters in the new home.

Baseball in Trade Circles Scheduled

The enthusiasm over the first series of games played as tryouts between the local paper distribution houses and their teams has been responsible for the development of an organized plan of summertime schedule of games to be played in Fairmount Park. So far the successful team in the weekly contests has been Riegel & Co., Inc. which has won four games out of five. The Champion player of the trade is Captain Frank O'Brien, of the Riegel forces who has won not only the laurels of the paper trade contests but who also has a record of many triumps in scholastic games achieved during his years of captaincy for the Catholic High School Team, when a student at that institution of learning.

Binder Board Men Endorse Simplification

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., July 8, 1925.—Endorsement of a simplification program has been made by the Binder Board Manufacturers' Association and a survey will be made in the near future under the direction of William A. Gately of the Simplified Practice Division of the Department of Commerce.

The Association endorsed the project of following an address made to the Association by Mr. Gately in New York on June 23. The Association has promised to cooperate.

Mr. Gately is now wajting to hear from Leigh Davey president of the Association who will forward some data to be used by the Simplified Practice Division in compiling a questionnaire to be sent to the trade for a preliminary survey. If the proper cooperation is shown by the industry Mr. Gately figures that a report of the survey should be ready for distribution in September.

Fairly Seasonable Paper Demand in Toronto Market

Demand for First Half of Year not up to Expectations, Although not as Unfavorable as Reported in Some Quarters—Crown Timber Agent of Port Arthur Reports Cut of Pulpwood Last Winter Reached 266,311 Cords, Second Largest in Five Years

[FROM OUR REGULAR CORRESPONDENT.]

TORONTO, Ont., July 6, 1925.—There is little or no change in the general paper situation except that the summer quietness has set in in most lines and members of the staffs of the different paper houses have begun to take their annual vacations. Demand is fairly seasonable but no marked change has occurred and the volume of business done during the first half of the present year did not come up to expectations although the net result is not as favorable as represented in some quarters.

In the rag and paper stock line there is a better demand for all grades from both large and small mills and as a result some lines of stock are getting scarce with the decrease in supplies, coupled with the increase in demand, there is a possibility that prices will stiffen in the near future. The mills would prefer a steady flow and stabilized prices. One concern reports that it has handled a bigger tonnage during the past month than at any period since 1920 and a situation has arisen just now which would justify the collecting firms in boosting values but so far this has not been done.

Big Cut of Pulpwood Reported

J. H. Millway, Crown Timber Agent of Port Aruthur, Ont., reports that the cut of pulpwood in that district during the past winter reached 266,311 cords, which is the second largest cut in the last five years. Settlers are now engaged in cutting and peeling spruce and balsam and this work will continue until the end of August at whch time the peeling season comes to a close. A large amount of pulpwood is being taken out by settlers in Northern Ontario in expectation of an improved demand on the part of the mills in the near future.

Planning Big Paper Mill

The debenture holders of the Mattagami Pulp and Paper Company, Smooth Rock Falls, Ont., have devised a plan for paying off the bond holders. The National Trust Company, trustees for the holders of the six per cent, twenty-one year, first mortgage bonds of the company, has sent out an official notice to the effect that it does not seem necessary that a meeting of the first mortgage bondholders should be called to consider any plan for the reorganization of the company, as the assets of the organization are sufficient for the bondholders. The belief is expressed that the properties of the Mattagami Company are worth more than sufficient to pay in cash the total claim of the first mortgage bondholders, both as to principal and interest. The Mattagami Company, which is a large producer of sulphite pulp, is said, after refinancing, to be planning the erection of a large paper mill.

Friendly Accident Prevention Contest

The Sault Ste. Marie plant of the Spanish River Pulp and Paper Mills, won the shield last year offered by the Ontario Pulp and Paper Makers Safety Association for the best accident prevention record. Arising out of this, a friendly contest has been entered into between the Sault plant and Laurentide Company, of Grand Mere, Que., which organization had a fine record during the past year in reducing the frequency and severity of accidents. J. H. Turner, Safety Engineer of the Laurentide Company and R. M. Olzendam, Secretary of the Department of Industrial Relations of the Spanish River Pulp and Paper Mills, got together and arranged the competition which will run from July 1 to September 30. Certain rules have been drawn up and agreed to. A. P. Costigane of Toronto, Safety Engineer of the Ontario Pulp and Paper Makers Safety Association, has been appointed referee, his name being submitted by both sides, which is a high tribute to his ability and fair mindedness.

Fort Frances Paper Co. Loses Appeal

The appeal of the Fort Frances Pulp and Paper Company, of Fort Frances, Ont., in an action brought by the town of Fort Frances for taxes has been dismissed by the First Division Court, Toronto. The company counterclaimed for $34,350 for electrical power supplied the town. The local Master allowed $16,174 and this amount stands.

Locating New Paper Mill in Manitoba

George R. Gray, of Sault Ste. Marie, Ont., manager of the woods department of the Spanish River Pulp and Paper Mills, was in Winnipeg recently accompanied by William N. Hurlbut, expert paper mill engineer of the company from Dayton, Ohio, in regard to the selection of a site for the new news print mill which will be erected at Fort Alexander, Manitoba. Mr. Gray said that, although the contract with the Canadian government in the matter of the McArthur-Spanish River deal, called for the erection of a hundred ton mill within eighteen months, the company intended to go right ahead, and put up a two hundred ton news print plant. The company is keen to begin construction work at once owing to the fact that but little building could be carried on during the severe winter months. The plant will cost $4,500,000 and will give employment to 500 men annually.

Notes and Jottings of the Industry

W. H. Guettler, president of the Canadian Barking Drum Company, Limited, and Fibre Making Processes, Inc. spent a few days in Toronto recently on his way to Quebec where he sailed for Europe, accompanied by Mrs. Guettler and his son. He says that foreign business of the company is gradually expanding, the firm having recently received an order from the Oji Paper Manufacturing Company, Tokio, Japan, for a barking drum.

George W. Pauline, president of Ritchie & Ramsey, coated paper manufacturers, Toronto, accompanied by his wife and daughter left this week on a visit to England.

R. G. Jennings, of the Ratcliff Paper Company, Toronto, is spending his holidays at various points in Ontario. He has been with the company a great many years and is a director of the organization.

A. P. Costigane, secretary-engineer of the Ontario Pulp and Paper Makers' Safety Association, Toronto, has been elected a member of the American Society of Safety Engineers. For some years he has been a member of the National Safety Council.

The fifty-first annual picnic and games of Kilgour Brothers, Limited, paper bag and box manufacturers, Toronto, was held recently to Queenston Heights, Ont., and was largely attended. An enjoyable time was spent by all departments and several paper companies contributed valuable prizes.

F. C. Slocombe, an employee of the Provincial Paper Mills camp at Pass Lake, forty miles east of Port Arthur, Ont., was killed by a Canadian National passenger train while walking on the track.

Hon. James Lyons, Minister of Lands and Forests for Ontario, left last week for the James Bay frontier, using an aeroplane to make the journey.

Research Work of National Folding Box Association

The resolve to prosecute with vigor the work of the Research Bureau was the outstanding feature of the membership meeting of of the Folding Box Manufacturers National Association held at the Book-Cadillac Hotel, Detroit, June 11. All previous activities were held to be subservient to this single and important undertaking. The members voted to concentrate efforts upon this enterprise in the knowledge that the tangible value of the developments of the Bureau as they progress would redound in large measure to the advantage of all participants.

Report of Dr. Billstein

This field of activities is disclosed in the following report submitted to the members at the meeting by Dr. A. M. Billstein of The Lord Baltimore Press and Chairman of the Research Committee.

"You may recall that at our membership meetings for three or four years past we had discussed various ideas and suggestions as to ways and means of enlarging the field for folding boxes, and that at the meeting held in Rochester last year, through the good offices of President Byrne, Ezra Levin, Director of the Research Laboratory of the Kalamazoo Vegetable Parchment Company, was our guest and addressed us on some phase of their Research work and largely as a result of what Mr. Levin said our ideas were crystalized and you voted an appropriation of $5,000 for Research work and instructed your committee to work out the details and begin.

"The task confronting the committee presented three major problems:—Outlining the kind of Research and establishing Standards—Equipping a laboratory—Securing the personnel.

"Fortunately the Kalamazoo Vegetable Parchment Company has been doing similar work for some time under the direction of Mr. Levin, and at his suggestion your committee went to Kalamazoo for a conference with Mr. Kindleberger of that company and concluded arrangements for carrying on our Research work at their laboratory. Dr. G. F. DesAutels, Ph. D. (Clark University) was engaged to carry on the work, under the direction of Mr. Levin.

"Laboratory work began October 15, 1924, and has continued uninterruptedly since, the number of investigations and activities has continually grown.

"The primary work your committee and Research directors planned was studies of Boards and Papers in relation to moisture proofness and grease penetration. As these were almost untouched fields the procedure and apparatus had to be determined upon. Special apparatus has been devised and built and is now in active use, in fact the laboratory is now well equipped for both Chemical and Physical research.

"The work so far done by the laboratory on these two problems has been published to the members in our Bulletins Nos. 2 and 3. Bulletin No. 4, a preliminary report on grease resistance, will be distributed shortly. Other activities have also been carried on and include three special investigations for members, requiring more or less laboratory work as follows:—1. Comparative grease resistance of several samples of Board. 2. Investigation of cause of Butter taint. 3. Coffee Package tests.

"Inquiries for members requiring no special laboratory tests: Coffee 2, Tea 1, Soap 2, Sugar 1, Cereal Flake, 1, Salt 1.

"The details of these minor activities will be sent to the membership in the form of Progress Reports, and it is the intention of the committee to issue such reports at frequent intervals that the members may be fully informed of all the Research work.

"Several conferences were held with salesmen of member concerns in which they were informed about the technical side of their sales problems.

"Our work on moisture proofness and grease resistance has been stimulated by a fortunate cooperative arrangement with a chemical company of New York. On May 5, representatives of the company conferred with us on plans for demonstrating the qualities of a water proofing material in which they were interested. At the conference it developed we had made plans to study in the same material and the chemical company offered to pay the expenses of two engineers to work at our laboratory under our direction on this problem in which we had a mutual interest. Mr. Kindleberger of Kalamazoo Vegetable Parchment Company approved the plan and we began this important work at no expense to the Association.

"The program for the immediate future, in addition to continuing the investigations now under way, contemplates studies of packaging Coffee, Milk Powder and in cooperation with the U. S. Bureau of Chemistry the packaging of Tea; designing and building apparatus for testing porosity of boards and papers and for measuring rigidity of boxes.

"We are gradually collecting at the laboratory a library and file of more or less technical information relating to our work and to the industry, so as to have at hand a ready means of reference. The value of this to members is that it will enable the Research Bureau to answer inquiries comprehensively and dependably.

"The committee desires to emphasize that the Research Laboratory in addition to carrying on its fundamental work is in a position to be of immediate service to the members in undertaking special investigations and study of any of their technical problems. Members are requested to take advantage of the facilities of their laboratory.

"The committee had adopted the following rules of procedure for the Research Bureau:

"1. The major activity is the study of fundamental problems and the establishing of bases for scientific knowledge of those problems.

"2. Special investigations for members will be undertaken provided they do not conflict with the fundamental work carried on or with the program for future investigations and that they be of general interest to the industry. There will be no charge for these special investigations provided the results may be published to all the members through our Bulletins or Reports. In cases where members desire the results be for their own use, a charge of $50.00 per day for the time required will be made.

"3. The committee to have full decision as to what special investigations are to be carried on and also the order in which they are to be done. Inquiries about technical matters and problems that require no particular laboratory work will be answered promptly and as fully as possible. There will be no charge for the service. A brief summary of inquiries and answers will be included in our Progress Reports.

"In conclusion we desire to record our appreciation of the fine cooperation of Mr. Kindleberger and his organization."

Remarks by Ezra Levin

Ezra Levin, Director of the Bureau, elaborated upon the committee's report.

Mr. Levin declared the objective of the Research Bureau was so to construct paper packages that the product contained in them would keep practically indefinitely in order that these packages might compete with the tin container. The control of moisture and grease penetration was necessary to preserve products under the varying climatic conditions to which they were subjected. This control was the big problem of the laboratory. Paper had been standardized, but not boxboard. Standards must be determined. The distribution, for example, of lard and lard substi-

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Mathieson Aqua Ammonia as a Casein Solvent

MANY manufacturers of high-grade coated papers have learned the advantages of Aqua Ammonia as a solvent for casein.

Aqua Ammonia is a superior solvent for this purpose due to the fact that it is already volatilized by heat. When the paper, impregnated with a solution of casein in ammonia, passes over the drying rolls, the ammonia is driven off. Only the casein—no solvent—remains in the paper.

Mathieson Aqua Ammonia, 26°, is a product of exceptional quality made by our synthetic process from highly purified nitrogen and hydrogen gases. It is shipped in standard 110 gal. drums from our Niagara Falls plant or from warehouse stocks in principal cities.

We solicit inquiries from all Paper Mills using casein.

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Deal Direct with the Manufacturer

tutes in paper packages was limited because no proper package had yet been devised to carry the product in perfect condition in all climates. The Bureau expected to devise a package to do this and was now working to that end. There are many difficulties to overcome. Silicating is not efficient. As an illustration, turpentine will penetrate silicated board in twenty seconds. Glassine is only comparatively resistant. The laboratory is now making many grease resisting experiments and expects to accomplish the desired result.

Alkali presents another problem. There are many so-called alkali-proof papers that are inefficient. The problem is to devise an efficient alkali-proof package and that will be done.

The selling of folding boxes depends upon their efficiency. It is worth much to folding box manufacturers to have these problems solved.

Mr. Levin described the newly installed equipment in the laboratory for making the various experiments and tests.

Most Important Association Work

F. M. Durbin, vice president of the Sefton Manufacturing Corporation, and president of the Association, declared that the committee and the directors regarded this as the most important work of the Association. The Bureau would be directed and policed by the Committee. All members would have a right to send in inquiries on any subject in which they were interested. Due credit must be given to Messrs. H. C. Stevenson and J. F. Bryne for originally opening the subject that had resulted in this valuable activity.

As indicative of the manner of approach to the problems confronting the Research Bureau Bulletin No. 4 issued by the Bureau is herewith reproduced:

Grease Proof Packages

REPORT No. 1

The present state of our knowledge of the grease-resistant properties of boards and papers is very meager and so incomplete as to give us no solution to the important problem of whether paper is adaptable for adequately packaging products containing grease or oils.

An investigation of this subject requires no apology. If research demonstrates that paper may be substituted for glass and tin for packaging this class of products a very large field will be opened for our industry.

Obviously the first step in the study of this subject is a determination of the grease-resistant properties of materials now available. This report covers that phase.

Materials now used, designed to prevent grease penetration, may be described briefly as follows:

(a) Greaseproofed board. This is usually a board treated with Sodium Silicate.

(b) Lined board. Board, to which a greaseproof paper has been attached. These papers are known as glassine[1], greaseproof[2], and vegetable parchment[3].

(c) Bag liner. A bag made of glassine, greaseproof, vegetable parchment or dry waxed paper[4]; inserted in the carton by hand or made and inserted automatically by special machinery.

What determines grease-resistance and why are certain papers greaseproof? It must be admitted that here is an unexplored field for fundamental study on surface tension phenomena which would enlighten the entire subject. At this time we can only note several pertinent facts revealed from a study of the construction of materials used for greaseproofing.

GREASEPROOF PAPERS.—It is, of course, common knowledge that glassine, greaseproof and vegetable parchment paper are, to a greater or lesser degree, greaseproof.

In the thorough beating essential to the manufacture of glassine and greaseproof, the fibers are somewhat changed. A mucilage is developed on the fibers, forming what is known as a hydrocellulose. Upon drying and calendering, this hydrocellulose forms a complete film which is resistant to grease penetration.

When parchment waterleaf is passed through sulphuric acid a similar mucilage is formed on the fibers; this mucilage, when fixed and dried, also exhibits the characteristic of greaseproofness.

It should be ponted out that these papers, though more or less resistant to penetration of greases and oils, are not therefore necessarily impermeable to atmospheric moisture, volatile oils or other gases; and neither are they necessarily resistant nor impermeable to water.

Both glassine and greaseproof disintegrate in the presence of water, while vegetable parchment does not. Thus, the latter substance has the unique property of not entirely losing its greaseproof characteristics when in contact with a moist product.

Dry waxed papers must be briefly dismissed. Most greases and and oils are miscible with paraffin and one would not expect waxed papers to be resistant to grease. This is verified by the results of the present investigation.

GREASEPROOF BOARD.—A greaseproof board is made by the application of a film to the surface of board or on the fibers within the board to function similarly to the hydrocellulose of greaseproof papers.

Sodium Silicate is the material commonly used: As will be shown later, this material is not satisfactory.

The development of an efficient grease-resistant board is an urgent need in the folding box industry. We feel sure that intensive study of this problem will be rewarded with success. The limited attention this laboratory has been able to give this subject has suggested several qualifications for grease-resistance which should be noted: First; such board should not lose its greaseproof qualities, when scored, folded or rolled. Secondly; it should be odorless, tasteless and if possible colorless. Thirdly; the greaseproofing material must be cheap and easily applied.

LINED BOARD.—Boards lined with greaseproof papers are widely used. The adhesive is usually Sodium Silicate. It is held that the adhesive will fill up imperfections in the sheet so that the board is more grease-proof than the paper alone.

While we have not been able to completely study this phase of the subject, it is safe to assume that the adhesive may very well enhance the grease-resistant quality of the board. An investigation of various glues with this motive in mind seems to us to be a very worthy object of study.

BAG LINERS.—Bags made of greaseproof paper are used in large quantities. Automatic machinery which makes a bag from the roll and inserts it in the folding carton, fills and seals the contents, is increasingly used by large manufacturers and distributors. The advantages of the loose sheet of grease-resistant paper as compared with lined board are incidental to greaseproofness, but nevertheless important. The bag prevents sifting and makes a more attractive package from the standpoint of the consumer. It it is a visible protection and has a favorable reaction on the customer. The conclusions drawn from this investigation are that there is no correlation of grease-resistance between the same weight and type of papers made by different manufacturers.

Consequently, the membership should obtain a report from this laboratory on the comparative grease-resistance of any proposed liner for board. Furthermore, we will be able to recommend upon examination of submitted samples the paper to be used by any prospect in a greaseproof package.

Laboratory tests are the only reliable basis upon which the greaseproof values of papers may be established. The fact that a paper is called "Greaseproof" does not nescessarily mean that it affords sufficient protection.

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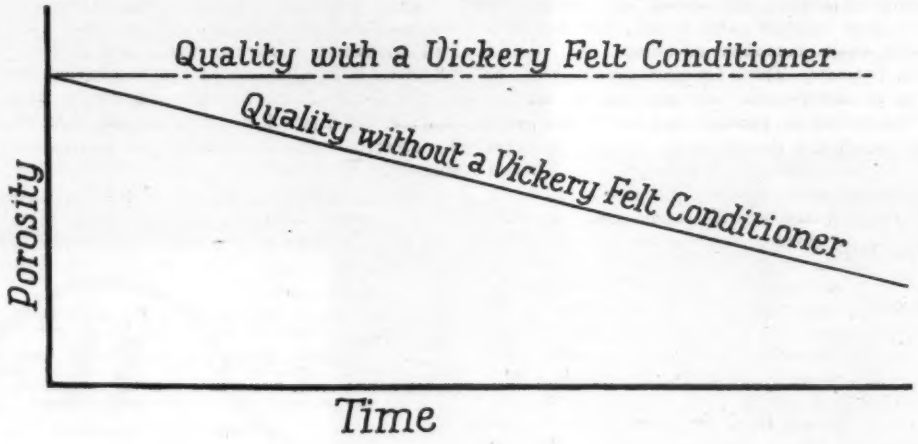
[1]Glassine: A sulphite paper, manufactured from pulp given long continuous beating, and highly calendered.

[2]Greaseproof: A sulphite paper, manufactured similarly to glassine, distinguished from it chiefly by the shorter beating time. This paper is often called imitation parchment.

[3]Vegetable parchment: A paper made by passing a sheet, made of rag and sulphite, through sulphuric acid and then thoroughly washing.

[4]Dry waxed paper: A waxed paper in which the fibers are thoroughly saturated with paraffin, no wax remaining on the surface.

Keeping the Quality Line Up



As a felt fills up, the porosity decreases, drying becomes variable, finish irregular, and quality falls off.

The VICKERY FELT CONDITIONER

maintains the porosity of the felt without shutdowns for washing; thus it removes one of the fundamental causes of uneven drying and irregular finishing. As far as felts are concerned, it

Of 200 Vickery Felt Conditioners Sold 91 were repeat orders

KEEPS THE QUALITY LINE UP

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The types of tests which may be made are analogous to those serviceable in a study of moisture proofness[5]:

(1) PRACTICAL TESTS OF real products under service conditions may be made.

The Research Bureau can render considerable service in this connection if fully informed of the experiences which members have had with customers packaging greasy products. Such data, assembled from numerous sources and studied as a whole, will yield information of great practical value to all. The packaging of lard and cocoanut awaits immediate attention.

(2) ACCELERATED PRACTICAL TESTS for greaseproofness can be made by putting up in cartons some substance such as sawdust soaked in oil, and then storing the packages in a hot chamber, such as has recently been installed in the laboratory. It is to be noted that such a test is readily adaptable to experiments with different kinds of greases or oils.

(3) DIRECT TESTS OF PAPER AND BOARD, however, offer the most promising methods for directly attacking the problem. This method, as used to obtain the results described in this bulletin, is briefly as follows: Test specimens of paper are placed upon a ground glass plate, whose under side may be observed by means of an easily adjustable mirror. A small pile of sand is placed on each specimen, and the sand saturated with a turpentine solution of black dye. The relative speed with which the black turpentine penetrates the different specimens gives a good idea of their relative greaseproof values. Penetration is visible from the mirror. This method is based upon the greaseproof testing methods described by Smith[6] and Carson[7] and the waterproof testing method described by the latter. Some modifications and standardization of procedure have been introduced: Sand is dried and screened to 20 mesh; a 1-dram homeo vial full of this sand is poured onto each test specimen in exactly the same manner each time. A saturated turpentine solution of black dye is used in all tests; tests are always covered with 6-cm crystallizing dishes. Use of the ground-glass plate and observation by means of an adjustable mirror are particular advantages.

The actual manifestations of penetration in general are of two types: The grease either comes through evenly and in large dark blotches, or it starts coming through in scattered dark specks, which may gradually or quickly enlarge to spots and then to blotches. All parchment papers tested and found to be greaseproof nevertheless showed scattering dark specks on the under side of test specimens, whereas the heavier grades of glassine did not. While this does not appear to indicate any appreciable amount of penetration of the parchment, it naturally affects the appearance unfavorably.

Results obtained by this method are comparative only, and do not yield a definite numerical value for each paper examined. Carson (footnote 7, p. 3) calls attention to the need of a test which will give numerical values, a matter in which we concur.

Data presented in this bulletin are to be regarded as preliminary. Many more samples of each kind of paper must be examined, to firmly establish the results. However, a good general idea of the relative greaseproof values of 41 different samples of Glassine, Greaseproof and Vegetable Parchment has been obtained, representing various weights of papers and a few samples of lined board, from 6 different companies. No attempt was made to obtain samples from every company manufacturing greaseproof papers; representative, well established firms were chosen.

Experimental

In this section is presented the classification according to degree of greaseproofness, resulting from comparative tests of the 41 papers examined.

[5]Research Bureau Bulletin No. 3.
[6]The Turpentine Penetration Test for Greaseproof Paper, TAPPI Papers Series VII, No. 1 (June, 1924), p. 23.
[7]Testing Paper for Pemeability to Liquids—F. T. Carson—PAPER TRADE JOURNAL, LXXX, No. 1,059 (Mar. 25, 1925).

It is to be borne in mind that results here given are comparative only, and obtained by the use of but one grease medium. It is quite possible that papers shown by these tests to be only moderately greaseproof might be entirely satisfactory for the packaging of greasy materials having lower penetrative value. Any such possibility would require either a practical test or a special modification of direct paper and board tests.

Papers tested are indicated as follows: G P = "Greaseproof" Paper. B = Lined Board. G = Glassine. P = Parchment. Full information concerning weight and grade of each paper and by whom it is manufactured will be supplied upon request.

It was found that the following classes must be considered, and that the papers listed, distinctly belong to the indicated class. No order of values is implied wihin a given class, except where specifically noted, the numbers being consecutive only.

I.—VERY GREASEPROOF—NO PENETRATION IN 24 HOURS OR LONGER

1.	Sample	G P 1	7.	Sample	P 1
2.	Sample	B 1	8.	Sample	P 2
3.	Sample	B 2	9.	Sample	G 4
4.	Sample	G 1	10.	Sample	G 5
5.	Sample	G 2	11.	Sample	P 3
6.	Sample	G 3			

Notes.—(1)—No. 1, above, Sample G P 1, is too brittle for use as a bag liner, and it is consequently suitable only for use as a liner attached to the board.
(2)—No. 11, above, Sample P 3, has a surface such that pools of the black turpentine collect on the upper face of test specimens and show through as dark areas, though penetration has not occurred. This unfavorable appearance was not manifested by other makes of papers.

II.—SOMEWHAT GREASEPROOF

(a) Quite greaseproof, but distinctly exhibiting some penetration if subjected to a 15-hour test.

1.	Sample	G P 5	5.	Sample	G P 3
2.	Sample	G 6	6.	Sample	G P 4
3.	Sample	G 9	7.	Sample	G 7
4.	Sample	G P 2	8.	Sample	G 8

Notes.—(1)—No. 2, above, Sample G 6, is the best of this class and rates close to Class I.
(2)—No. 3, above, Sample G 9, is placed in this class rather than in Class I only because of an apparently characteristic prevalence of pinholes and the fact that pinholes in glassine are apt to allow grease to leak through badly. Pinholes in a highly beaten sheet may very probably be due to the dropping out of small foreign particles incorporated into the web during its manufacture, and are consequently larger holes than the pinholes of parchmentized papers.
(3)—No. 4, above, Sample G P 2, always exhibits scattering specks which are very slow in enlarging into spots.
(4)—No. 7, above, Sample G 7—In 3 out of 4 tests, prevalence of pinholes appeared to be characteristic.

(b) Not immediately penetrated, but distinctly exhibiting penetration in a few hours.

1.	Sample	P 4	4.	Sample	G P 7
2.	Sample	P 5	5.	Sample	G 10
3.	Sample	G P 6	6.	Sample	G P 8

Note.—No. 5, above, Sample G 10, is the poorest of this class.

III.—NON-GREASEPROOF—COMPLETE PENETRATION ALMOST AT ONCE

(a) Some slight greaseproof value.

1.	Sample	P 6	3.	Sample	G P 10
2.	Sample	G P 9	4.	Sample	G P 11

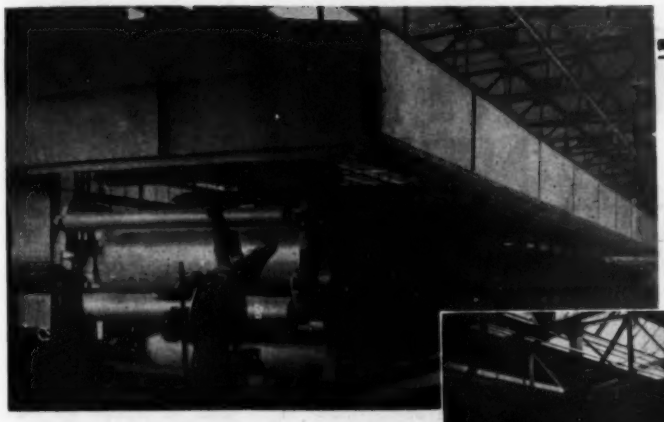
(b) Practically worthless under the conditions of these tests.

1.	Sample	P 7	7.	Sample	G P 12
2.	Sample	P 8	8.	Sample	G P 13
3.	Sample	P 9	9.	Sample	G P 14
4.	Sample	P 10	10.	Sample	G P 15
5.	Sample	P 11	11.	Sample	G P 16
6.	Sample	G 11	12.	Sample	B 3

In addition to the above tests, a preliminary study was made of the grease-resistance of silicated board. Nine samples of .015 manila-lined news board were painted with silicate to form coatings ranging from a very thin film to a thick layer. Conclusions reached were these: To render board greaseproof to a useful degree by coating with silicate, it is necessary to apply so heavy a coating that the resulting product is unduly thick, can be prepared only with difficulty, and is too brittle and readily broken to be of practical value.

Thinly coated boards, such as have been commonly used, are completely penetrated almost at once.

Tests of various samples of dry waxed paper were also made. Results are summarized by the simple statement that as grease-resistant material such papers are of no value whatsoever.



The upper view at the left shows the hood of the Sirocco installation over the dryers. The view below shows the back panel and duct work.

11

Outstanding Results

1. No vapor escapes from dryers into machine room.
   a. simplifies ventilation,
   b. reduces temperature at roof,
   c. eliminates sweating of roof and walls,
   d. simplifies equipment and maintenance cost,
   e. adds to comfort of employes.
2. Air flows between dryers, absorbing vapor at source, thus reducing steam pressure necessary in dryers and increasing dryer capacity.
3. Insulation of dryers at top and back, and application of warm air at dryers, reduces radiation from dryers.
4. Hood built in sections and installed without shutting down machine. Supplies air to top of dryers and is guaranteed to remain dry.
5. Design of housing and method of exhausting makes possible exhausting at high saturation. This requires less air and removes less heat from mill.
6. System is balanced, doing away with indrafts, stops drafty conditions in mill and aids heating of adjoining rooms.
7. Exhaust and supply air under control, eliminating roof ventilating effects.
8. System is fireproof. Controlled exhaust and no roof effects reduce fire hazard.
9. Air supplied and exhausted through large ducts, requiring low power consumption.
10. Quality of paper improved through reduced temperatures and control of drying.
11. Sirocco Air-Washer Economizer reclaims 100% of heat in cold weather and furnishes clean washed air to system at constant condition of humidity.

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READ over the eleven advantages of Drying Systems Air Conditioning Equipment in the panel at the left. Consider each of these particular features in connection with your own plant.

Each of the results outlined has been proven in practice. There is no theory in it at all. We know that these results have been realized—that they can be accomplished in any paper mill.

Your business is to produce a quality sheet, at the lowest commensurate cost. This make in equipment, designed and installed by Drying Systems Engineers to meet your particular needs, makes high quality and low cost positive.

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CONSTRUCTION NEWS

A Summary of Vital Facts Regarding Construction, Finances and Operation of Paper Mills

Construction News

Chicago, Ill.—The Ajax Box Company, heretofore located at 645 West Austin avenue, has leased a portion of the building at the Union Stock Yards, previously used by Morris & Co. for a glue factory, and will use for a plant for the manufacture of corrugated paper boxes. The space totals 32,900 square feet, and has been taken over for a period of ten years.

Boston, Mass.—Tileston & Hollingsworth, 892 River street, manufacture of paper products, has taken out a permit for a one-story addition to its plant for general manufacture, estimated to cost about $18,000. Foundations will be placed under way at an early date.

Cincinnati, Ohio—The Bishopric Manufacturing Company, Este and Spring Grove avenues, manufacturer of wallboard products, has completed plans for the erection of a one-story addition to its plant to cost about $12,000, designed primarily for storage and distributing service. Benjamin Camp, Cincinnati, is architect.

College Point, L. I.—The Tulip Cup Company, 220 Fifth avenue, New York, has acquired through its president, Simon Bergman, the former local plant of the L. W. F. Engineering Company, Eighth street and Third avenue, comprising about 220,000 square feet of floor space, for a consideration of $202,000. The new owner is said to be arranging for the early occupancy of a portion of the property for the manufacture of paper cups and other paper specialties.

Orange, N. J.—Bids will soon be asked by Riley & Downer, Inc., 240 William street, manufacturer of paper boxes and containers, for its proposed new addition for increased manufacture. It will be three-story, brick, 60 x 100 ft., estimated to cost $75,000, with equipment. The Fletcher-Thompson Company, Inc., 542 Fairfield avenue, Bridgeport, Conn., is architect and engineer.

Everett, Wash.—The Everett Pulp and Paper Company has plans under way for the construction of a new pulp mill, consisting of two one-story buildings, reported to cost in excess of $300,000, with equipment. George F. Hardy, New York, is architect and engineer. A. H. B. Jordan is vice-president.

Chillicothe, Ohio—The Read Pulp and Paper Company has work in progress on an addition to its plant to be used for general operating service. The company will also carry out improvements at its present mill, including the installation of new ventilating apparatus, etc.

Tonawanda, N. Y.—The Kardex-Rand Company, recently organized to take over and consolidate the Kardex Company and the Rand Manufacturing Company, both with local plants for the manufacture of cards and other paper specialties for filing and office service, has acquired the Index Visible Company, New Haven, Conn., manufacturer of kindred products and will consolidate with its organization. The new owner is said to be planning to continue the New Haven factory as a branch plant. The company has also acquired the finding and filing system business of the Add Index Company, New York, manufacturer of card specialties, a subsidiary of the American Can Company, and will arrange facilities for production at its plant.

Seattle, Wash.—The Schumacher Wall Board Corporation, 6851 East Marginal Way, has preliminary plans under way for extensions and improvements in its plant, to include the installation of additional equipment for increased output.

Brooklyn, N. Y.—Fire, June 28, damaged a portion of the storage and distributing works of the Baeck Wall Paper Company, 233 Thirty-seventh street, Bush Terminal Building; an official estimate of loss has not been announced. It is expected to replace the damage.

Grand Falls, N. S.—The Province of New Brunswick, has acquired the water power rights of the Grand Falls Company, in which the International Paper Company, New York, is largely interested, and plans the construction of a power dam and hydroelectric power plant with capacity of 50,000 hp., a considerable portion of which will be used for paper mill service. The new station is estimated to cost in excess of $6,000,000, including equipment. A consideration of $1,200,000, was given for the property. The International Company has contracted with the Provincial Government for a total of 14,000 hp. from the new station, and is said to be planning the construction of a new mill in this locality.

Monroe, La.—The Brown Paper Mill Company, Inc., West Monroe street, has completed plans and will proceed with the erection of a new addition to its plant to be used primarily for distributing service, estimated to cost $22,000.

Monterey, Mex.—A. E. Padilla, P. O. Box No. 8, Monterey, is in the market for cardboard containers and boxes.

New Companies

New York, N. Y.—The Hersey Paper Company has been incorporated with a capital of $25,000, and 400 shares of common stock, no par value, to manufacture and deal in paper products. The incorporators are T. F. and J. F. Hersey. The company is represented by S. Strudel, 43 Exchange Place, New York.

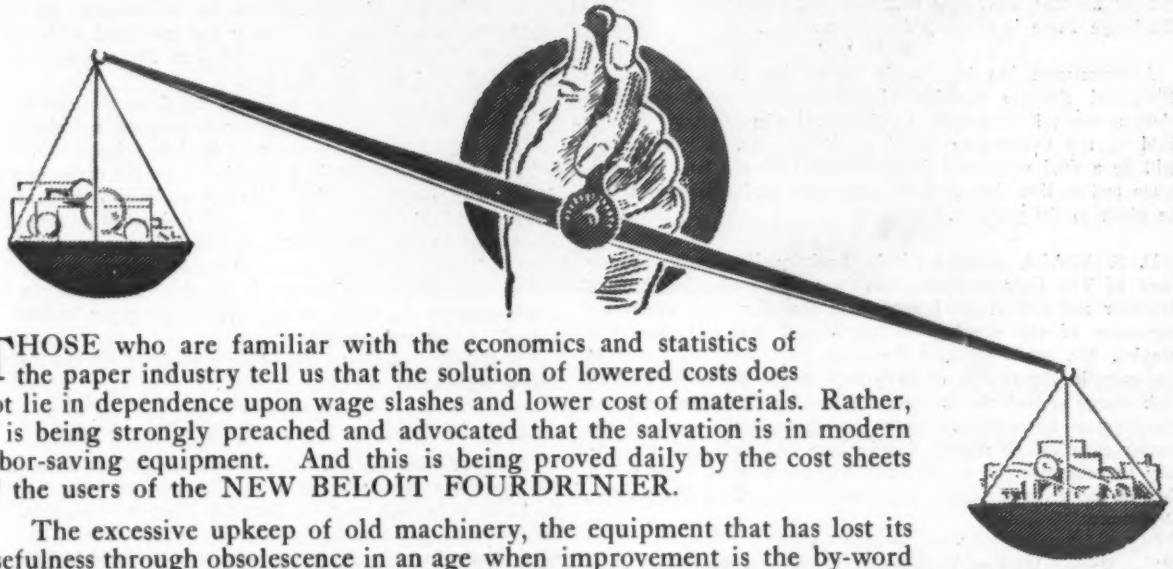
Denver, Colo.—The Colorado Pulp & Paper Company has been incorporated with a capital of $600,000, to manufacture and deal in pulp and paper products. The incorporators are B. Grimes, C. B. Meyers and W. F. Denious. The company is represented by Davis & Wallbank, 714 Equitable Building, Denver.

New York, N. Y.—The Lion Envelope Company has been incorporated with a capital of $25,000, to manufacture envelopes and other paper specialties. The incorporators are M., R., and J. Grae. The company is represented by Ridgeway, Ridgeway & Slote, 41 Park Row, New York.

New York, N. Y.—The Folding Carton Company has been incorporated with a capital of $20,000, to manufacture paper boxes and containers. The incorporators are A. and C. A. Johnson, and F. A. Kreussling. The company is represented by L. G. Edwards, 30 East Forty-second street, New York.

Orange, N. J.—The Leonardis Mill Supply Company, 135 Parrow street, has filed notice of organization to manufacture and deal in paper mill supplies. John Leonardis, 44 Riggs Place, West Orange, N. J., heads the company.

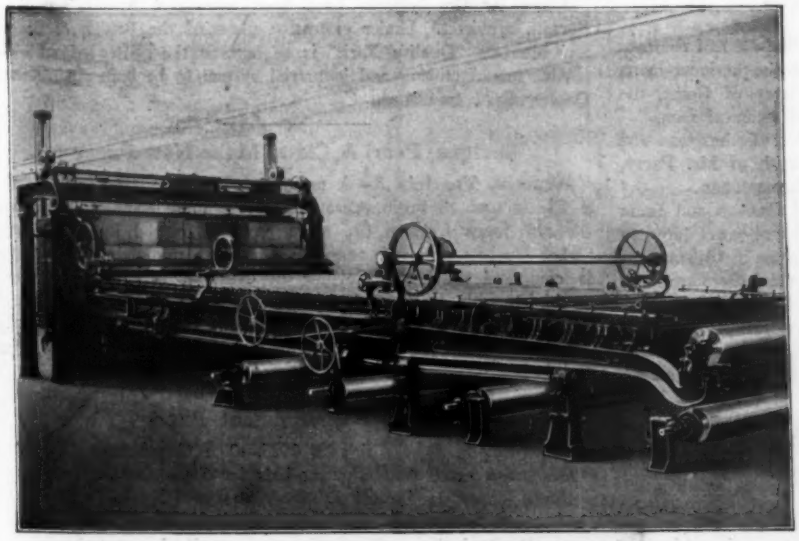
The Cost of Modern Machinery VS. Excessive upkeep of the old



THOSE who are familiar with the economics and statistics of the paper industry tell us that the solution of lowered costs does not lie in dependence upon wage slashes and lower cost of materials. Rather, it is being strongly preached and advocated that the salvation is in modern labor-saving equipment. And this is being proved daily by the cost sheets of the users of the NEW BELOIT FOURDRINIER.

The excessive upkeep of old machinery, the equipment that has lost its usefulness through obsolescence in an age when improvement is the by-word in the industry—these are matters that must be carefully weighed by every executive and board of directors. When that point has been reached where costs are excessive as compared to costs with modern equipment, then it's time to make use of the reserve fund.

When such matters are under consideration, let the record of the NEW BELOIT FOURDRINIER show you what can be accomplished by modern methods. In at least three ways, it will convince you that it is the one paper-making machine today that meets universal favor, for it has reduced **labor, time** and **money-saving** to a science. Its efficiency is demonstrated by the fact that 16 orders, of which 4 are re-orders, have been booked in a remarkably short space of time. Through its ADJUSTABLE, REMOVABLE and SHAKABLE features, it will demonstrate to you what can be accomplished on a modern machine in an age of progress.



Bulletin No. 9 gives further facts. Send for it.

The NEW BELOIT FOURDRINIER

Beloit Iron Works — **Established**

BELOIT IRON WORKS BELOIT WIS.

Beloit, Wis., U. S. A. — **Since 1858**

New York Trade Jottings

Dr. Hugh P. Baker, executive secretary of the American Paper and Pulp Association, is now enjoying his annual vacation. He is spending it in camp in Wisconsin.

* * *

The Hersey Paper Company which has just been incorporated with a capital stock of $25,000 for the manufacture of waterproof paper has moved from 264 11th avenue to 521-523 West 26th street. New equipment is being installed including a new cutting machine, rewinding machines, etc. Sidney Struble of 43 Exchange Place is attorney for the company.

* * *

Announcement has been made by William A. Gately of the Simplified Practice Division of the Department of Commerce that a general conference on boxboard simplification will be held at the Commodore Hotel on Wednesday, July 29. This will be a final conference in connection with the boxboard program and at that time it is expected that final endorsement will be given to the program.

* * *

D. S. McAfee, manager of the Sanitary Engineering department of The Dorr Company, has been appointed General Sales Manager and will in the future direct the sales work of all departments of the company in the United States, Canada and Mexico. Mr. McAfee joined the Sales Department of the Dorr Company in the Spring of 1916 and at the beginning of 1922 took charge of both the Sanitary Engineering Department and the Development Department. Under his direction the work of the former expanded so rapidly that in June 1923 he found it necessary to relinquish his development department work, since which time he has given his entire attention to the Sanitary Engineering Department.

Paper Mill at Blossvale, N. Y., to Reopen

BLOSSVALE, N. Y., July 3, 1925.—The plant of the Blossvale Paper Company will resume operations immediately.

B. W. McKenzie, the now owner and manager of the paper mill, says that his firm will manufacture napkin tissue made of pulp shipped from Canada, for which a market already is established. Converters will cut the tissue, produced in rolls, into commercial sizes.

The mill was built in 1872 by the late John Halstead of the firm Halstead, Perry & Smart. Mr. Halstead was the business man; the late John J. Parry, father of W. W. Parry of Rome, the financial man; and Joseph Smart of Troy, the technical man.

Mr. Smart left after two or three years, when the business was conducted by Halstead & Parry. Upon the death of Mr. Parry, Mr. Halstead bought it all and ran it until 19 years ago.

Then it was taken over by John O'Brien of Oswego and Isaac Allen of Ashalot, N. H., who disposed of it three years later to the late George H. Palmer of Phoenix. He ran it 13 years as the Blossvale Tissue Mill. For four years afterward three brothers, Joseph T. Foley, Frank A. Foley and Dr. John Foley of Rochester, ran the business under the name of its incorporation, Blossvale Paper Mills, Inc.

Following a year of idleness, the wheels are to turn again at the direction of Mr. McKenzie, who lived formerly in Waterville.

German Paper Directory

Seventh Edition, 1925. Verlag der Papier-Zeitung, Carl Hoffmann G.m.b.H., Berlin SW 11, 2 Dessauer Street, Price 35 marks, bound in full linen.

In comparison with the last edition of this valuable book, issued in 1921, the present edition contains many changes in addresses of paper manufacturers and paper dealers in Germany, which were brought about through the difficult economic conditions during the inflation period in Germany. There are also many changes in capitalization and in form of business organization. The poor business conditions in Germany were also responsible for the fact that a period of four years had elapsed before the 1925 edition appeared. From now on the book will be issued in new form every two years.

The book contains valuable information for everyone who desires to know the names, addresses and general business organization of the different paper manufacturers and paper dealers in Germany. A new feature of the book is a compilation of the various societies and association in Germany allied with the paper and pulp business.

In the first part of the book there are the names of the various plants that manufacture pulp, paper and cardboard, alphabetically arranged. There are also given those firms that sort rags and the large dealers of rags and old paper.

The second part contains a list of the firms that are engaged in the working up of paper into various products, and also all the printing establishments, all arranged in alphabetical order.

The third part contains in alphabetical order the names of manufacturers of writing articles and office equipment, the names of larger dealers in paper, the names of makers of picture postal cards and the like and also large dealers in the same, and the names of large and small dealers in postage stamps.

The most comprehensive part is the last section of the book which contains the names of all firms in the paper business, arranged by city and province.

The fifth part contains a list of paper products and the names of the manufacturers of these products.

St. Paul to Have $500,000 Box Plant

ST. PAUL, Minn., July 6, 1925.—St. Paul is to have a new $500,000 paper box manufacturing plant. Preparations being made for the plant, to be built near the Brown & Bigelow building on University avenue, were revealed at the city council session last week, when application was made for permission to build underground conduits for carrying electric lines and steam pipes from a central power station.

The new plant would be financed by the Quality Park Investment Co., a Brown & Bigelow enterprise. It will employ between 250 and 300 employes and would turn out paper containers for many of the northwest's greatest industries.

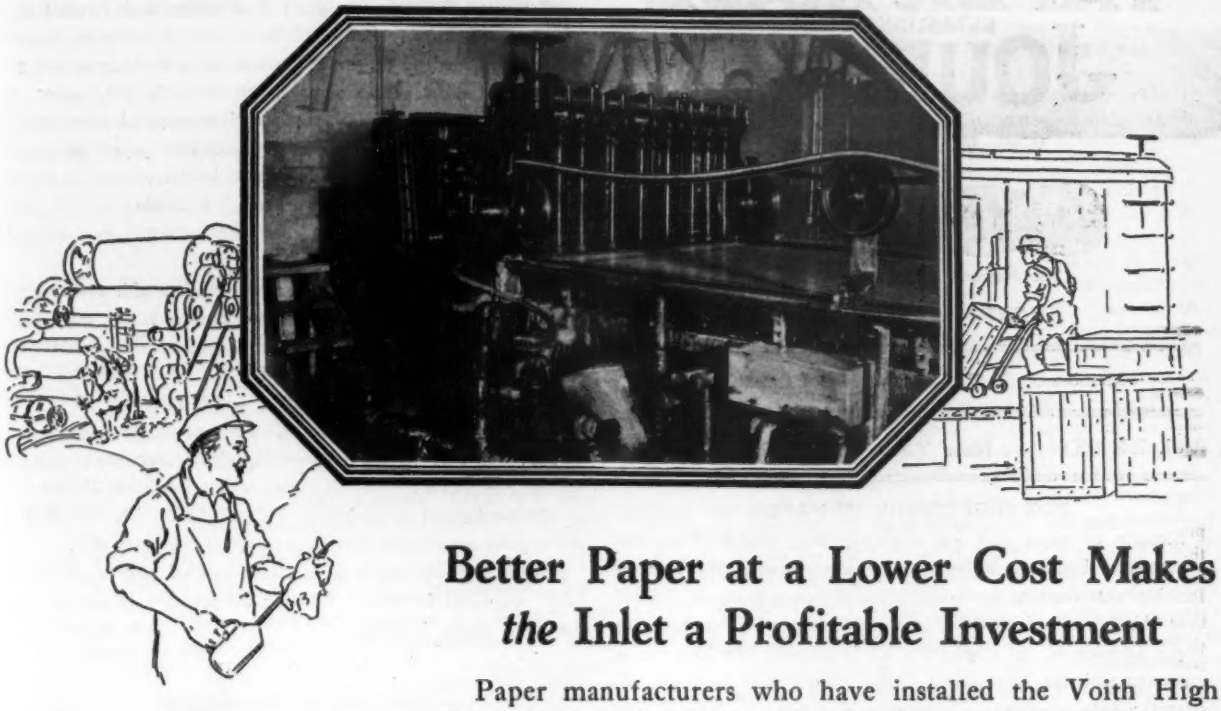
Plans for the building have been completed by Colburn O. Forsell, architect. Under expansion plans of the Brown & Bigelow interests "Quality Park" is to become the center of an extensive manufacturing and industrial system to be built up by the Quality Park Investment Co.

Sevigne, Pearl & Cie to Make New Paper

WINDSOR, Vt., July 7.—A new paper company, Sevigne, Pearl & Cie is soon to begin operations in the mule spinning room of the old Jones Lamson Co. more recently formed by the Pawtucket Hosiery Company near the Ascuntney mill dam. The firm is composed of Henri Sevigne of Nashua, N. H., a former machinist, with A. Y. Pearl and Harold Pearl of Dover, chemists who have experimented for a long time upon a specially treated paper. This new paper is of fine appearance and is used for wrapping paper.

Bids for Government Paper

WASHINGTON, D. C., July 8, 1925.—The Government Printing Office has received the following bids for 5,000 pounds of yellow manifold paper in 17 inch rolls; Whitaker Paper Company, at 21.77 cents per pound; Old Dominion Paper Company, at 22.49 cents; R. P. Andrews Paper Company, at 21.63 cents; American Writing Paper Company, at 21 cents; Barton, Duer, & Koch Paper Company, at 22 cents; Dobler & Mudge, at 21.49 cents; and Bryant Paper Company, at 14.75 cents.



Better Paper at a Lower Cost Makes *the* Inlet a Profitable Investment

Paper manufacturers who have installed the Voith High Pressure Stock Inlet know that they have made a sound investment that yields a product of improved quality, together with lower production costs and increased output.

The Voith Inlet enlarges the forming surface of the wire and gives better formation to the sheet at higher speeds. The sheet is of uniform caliper across the entire width of wire. The absence of foam and lump spots and breaks resulting therefrom mean less waste and cleaner rolls. The life of the wire is increased 20 to 30%, a saving of highest importance that reduces wire, replacement and shutdown expense.

Finally, it increases the returns from the paper machines that govern the profits of your business. A booklet giving full information about the Voith Inlet will be mailed on request. Write for it today.

With the Inlet in the Paper Industry

A Wisconsin Mill that recently installed an inlet immediately increased the speed of its machine from 70 to 94 feet per minute and produced a 144 lb. tablet cover sheet having better formation and more uniform caliper. The pop test exceeded one point per pound.

A New York mill using the Inlet operated a 206" machine continuously for three days and nights and produced 700 miles of newsprint paper without a single break. The maximum twenty-four hour production was 123 tons. The average speed of the machine was 780 F. P. M.

VALLEY IRON WORKS CO.

APPLETON, WISCONSIN

New York Office: 350 Madison Ave.

PAPER TRADE JOURNAL
ESTABLISHED 1872
With Which Is Combined
PAPER
The Magazine of the Paper Industry
HENRY J. BERGER, Editor

Member A. B. C. Audit Bureau of Circulations

Vol. LXXXI New York, July 9 1925 No. 2

FOREIGN TRADE IN PAPER

Exports of paper and board during May continued the improvements observable in the two preceding months, the value of the shipments reaching a total of $2,223,072, an increase of $117,151 over April, and of $228,623 over May, 1924, according to the Paper Division of the Department of Commerce. The increase, as compared with the latter month, was contributed to by nearly all classes, a notable exception being paper board and strawboard, exports of which still show a downward trend. Shipments of writing paper, and a few other minor items on the paper schedule, were also under those of a year ago, although somewhat better than during April. Among the important gains were exports of book and miscellaneous wrapping papers, which were 25 per cent, news print paper which was 50 per cent, and paper bags, and boxes and cartons, which were 60 and 80 per cent, respectively, above those of the preceding May. Surface-coated paper, tissue and crêpe paper, cover paper, kraft wrapping and greaseproof paper, toilet paper, blotting paper, papeteries and envelopes also registered a larger volume compared with May, 1924, and in the majority of cases in comparison with April. Exports of board and board products, on the whole were less than during the same month in 1924, exceptions being sheathing and building papers, wall board, and paper boxes as mentioned above.

Exports of paper base stocks were larger in volume during May than during the same period last year by nearly 15 per cent, but a decline in the value of rags and similar stock, which represented over half of these shipments, caused a reduction in the total value of the shipments by approximately 10 per cent.

Imports of paper and board into the United States during May were valued at $10,089,947, a slight increase over the value of the April imports, but a decrease of 4 per cent compared with May, 1924. Over 85 per cent of the imports as usual consisted of standard news print, of which Canada furnished 88 per cent, and Sweden, Norway, Finland, and Germany practically all of the balance. In contrast to the same month in 1924, nearly two-thirds of the receipts from European countries were from Sweden and Norway, which together furnished 19,093,993 pounds, thus substantially increasing their share in this trade during May as compared with April and with May, 1924. Imports from Germany and Finland, however, continued to decrease, May receipts in the case of the former showing a decline of 26 per cent compared with April, and of 64 per cent compared with May of last year. Imports of other classes of paper on the whole were under those of the same month of 1924, receipts of greaseproof paper, surface-coated paper, and tissue paper, together with paper boxes being the only items to register an increase in the volume of receipts, although an advance in the prices of a number of the higher grade papers brought about a corresponding increase in the value of these items.

Imports of all classes of paper base stocks, with the exception of rags and old rope and similar stock, were larger than during the same month last year, and imports of nearly all classes of wood pulp exceeded those of April. The chief source of supply of wood pulp imports was Canada, which furnished 75 per cent of the mechanical groundwood, 47 per cent of the sulphite pulp, and 44 per cent of the unbleached sulphate, or kraft pulp, its nearest competitors being Norway, which furnished 21 per cent of the mechanical groundwood, and Sweden which furnished 30 per cent of the sulphite and 54 per cent of the kraft pulp.

Imports of both paper base stocks and of pulp wood during May, registered increases of nearly 30 per cent in volume over the same month in 1924.

"QUALITY GUARANTEED"

The advantages to be gained by manufacturers through the production of "quality guaranteed" merchandise are set forth in a bulletin just issued by the Department of Manufacture of the Chamber of Commerce of the United States.

The bulletin states that "the consumer will pay for quality when guaranteed," and further declares that "there is no greater fallacy than that the greater portion of the buying public purchases on price alone.

"Trade associations serving more than twenty-five lines," the bulletin says, "have set up definite standards to protect the buyers of their commodities and this is proving not only of great benefit to their members but it also inspires the confidence of the consumer which must always precede buying.

"This matter of 'quality guarantees' is of interest not only to our domestic market but especially to all desirous of building up a permanent foreign trade in which there is little opportunity of examination before purchase and one mistake may forever prevent resumption of trade relations.

"The buyers of merchandise in various parts of the world making contacts with new sources of supply have to safeguard themselves in every way possible in getting the quality of merchandise which they desire and for which they pay. Buyers in Latin America have time and again raised the question of guaranteeing of quality, not only when they are making purchase in the United States, but in England; Germany, France, Italy and the other countries. Since 1923, the Secretariat of the League of Nations at Geneva has been making an investigation of methods of protecting importers against inferior quality. For more

than a year the International Chamber of Commerce with headquarters at Paris has been pursuing a study of the methods of protecting importers against shipments of inferior quality. These international investigations have raised the question of standards of quality and certificates of quality in the consuming countries of the world as well as in the manufacturing and exporting countries. Definite establishment of quality and standing back of shipments have become factors in international trade. The certificates of quality issued by a manufacturer and based on standards of quality set by reputable trade associations in an exporting country may play an important part in merchandising a commodity in a foreign country."

May Pulp and Paper Production Statistics

The May production of paper in the United States as reported by identical mills to the American Pulp and Paper Association and cooperating organizations, showed a decrease of 5 per cent as compared with April's production, following a 0.3 per cent decrease in April over March, according to the Association's Monthly Statistical Summary of Pulp and Paper Industry. All grades showed a decrease in production as compared with April, with one exception.

The Summary is prepared by the American Paper and Pulp Association as the central organization of the paper industry, in cooperation with the Binders Board Manufacturers Association, Converting Paper Mills Association, Cover Paper Association, News Print Service Bureau, Wrapping Paper Manufacturers Service Bureau and Writing Paper Manufacturers Association.

The figures for May for same mills as reported in April are:

Grade	Number of Mills	Production, Net Tons	Shipments, Net Tons	Stocks on Hand End of Month Net Tons
News print	66	129,026	126,487	32,037
Book	61	86,962	83,984	40,530
Paperboard	102	109.908	111,586	33,329
Wrapping	82	48,119	49,629	60,448
Bag	25	9,835	9,110	7,979
Fine	82	29,326	29,453	39,305
Tissue	46	11,945	11,331	13,501
Hanging	8	3,331	2,761	2,551
Felts	20	20,085	19,890	4,160
Other grades	64	20,153	19,546	14,103
Total—all grades	..	468,690	463,777	247,943

During the same period, domestic wood pulp production decreased 10 per cent, this decrease being distributed over all grades. The May totals (mills identical with those reporting in April) as reported by the American Paper and Pulp Association, are as follows:

Grade	Number of Mills	Production, Net Tons	Used, Net Tons	Shipments, Net Tons	Stocks on Hand End of Month, Net Tons
Ground wood pulp	102	115,659	91,979	3,457	187,036
Sulphite news grade	40	38,225	35,580	3,114	8,953
Sulphite bleached	22	21,856	18,518	3,960	2,781
Sulphite easy bl.	7	3,799	3,330	535	1,971
Sulphite Mitscherlich	6	6,248	5,299	1,105	770
Sulphate pulp	10	10,440	9,392	534	2,246
Soda pulp	11	16,533	12,338	4,042	2,228
Other than wood pulp	2	29	14	.....	41
Total—all grades	..	212,789	176,450	16,747	206,026

Dumping Order Against German Wrapping Paper

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., July 8, 1925.—A dumping order has been issued by the Treasury Department in the case of White Sulphite wrapping or bag paper from Germany under Section 201 (a) anti dumping act of 1921. L. C. Andrews, Assistant Secretary of the Treasury in announcing the issuance of this dumping order said:

"After due investigation I find that the industry of making white sulphite wrapping or bag paper in the United States is being or is likely to be injured by reason of the importation into the United States of white sulphite wrapping or bag paper from Germany, and that such merchandise is sold or is likely to be sold in the United States at less than its fair value."

A. P. & P. A. Becomes Increasingly Representative

In an address made at a luncheon of some fifty paper manufacturers at the Country Club at Kalamazoo early in June, Norman W. Wilson, Vice-President of the Hammermill Paper Company, and President of the American Paper and Pulp Association, said in part:

"At no time in the ever continuous growth of the paper industry of the United States has there been such outstanding need for a strong central association as there is today. It seems to me that the greatest contributions which the men directing the affairs of the Association can make to the paper industry and the American Paper and Pulp Association during this present year is to assist in every possible way in so increasing the membership of the Association that it will be truly representative of every phase of the industry.

"The Association is recognized today as never before at Washington and elsewhere through the country as the one organization which represents the entire paper industry. The several Departments at Washington with which the paper industry has contact, the banks of the country, other great national trade associations, and the public generally, are turning to the Association whenever accurate information as to our industry is needed. As an Association, we have the confidence of these outside organizations, and we propose to so carry on the work of the Association that this confidence will be deserved and maintained.

"It is our good fortune in planning to make the Association truly rperesentative of the industry to secure the aggressive help of Charles A. Gordon, Vice-President of the Oxford Paper Company, as Chairman of our Membership Committee."

Since the statement by Mr. Wilson at Kalamazoo, Dr. Hugh P. Baker, Secretary of the Association, who is acting as Secretary of the Membership Committee, has reported that the first efforts of this Committee have resulted in the election to membership in the Association of eleven pulp and paper mills in different sections of the country. These are as follows:

Brown Paper Mill Company, Monroe, La.; Foster Box Board Company, Utica, N. Y.; P. H. Glatfelter Company, Spring Grove, Pa,; Iroquois Pulp and Paper Company, Thomson, N. Y.; Jessup and Moore Paper Company, Philadelphia, Pa.; MacSim Bar Paper Company, Otsego, Mich.; Manistique Pulp and Paper Company, Manistique, Mich.; Munising Paper Company, Munising, Mich.; Tomahawk Kraft Paper Company, Tomahawk, Wis.; Tomahawk Pulp and Paper Company, Tomahawk, Wis.; S. D. Warren Company, Boston, Mass.

The members of the Membership Committee of the Association and the Chairmen of Sub-Committees are as follows: Charles A. Gordon, Chairman, Oxford Paper Company; C. R. McMillen, Union Bag and Paper Corporation; F. A. Leahy, Eastern Manufacturing Company; D. C. Everest, Marathon Paper Mills Company; I. J. Marcuse, Bedford Pulp and Paper Company; Louis Bloch, Crown Willamette Paper Company.

Chairmen of Sub-Committees: L. C. Anderson, W. B. Oglesby Paper Company, for Ohio; J. V. Baron, Sherman Paper Company, for Central and Northern New York; Louis Bloch, Crown Willamette Paper Company, for Pacific Coast; Alex Gilman, Allied Paper Mills, for Michigan; D. C. Everest, Marathon Paper Mills Company, for Wisconsin.

Myers Pulp Co. Creditors Get Dividend

DENVER, Col., July 5, 1925.—Judge George F. Dunklee has ordered Wilbur F. Denious, receiver for sometime of the Myers Pulp and Paper Company, which was recently sold at auction, to pay a dividend of 25 per cent on the principal amount of all claims of the general creditors of the company.

The plant is now being operated by the Colorado Pulp and Paper Company and prospects for its success, it is said are very encouraging.

SYMBOL of QUALITY
KALBFLEISCH CHEMICALS
FOR NEARLY A CENTURY

Chemicals for Paper Mills

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IMPORTED • DOMESTIC

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Grades - Grindings
MAXIMUM
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"EASTCO"
BLEACHED SULPHITE

Using "Eastco" Bleached Sulphite ourselves, testing it day by day, in producing our line of "Eastco" Fine Writing Papers, we have complete control—because we have complete knowledge—of its quality, uniformity and adaptability to the requirements of the paper maker.

"Eastco" Bleached Sulphite is good pulp; it makes good paper. Furnished in Bales, Rolls or Laps as required. Write for Samples and Prices.

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292 MADISON AVENUE, NEW YORK CITY

Section of the
Technical Association of the Pulp and Paper Industry

AN ORGANIZATION FOR THE ENCOURAGEMENT OF ORIGINAL INVESTIGATION AND RESEARCH WORK IN MILL ENGINEERING AND THE CHEMISTRY OF PAPER, CELLULOSE AND PAPER-MAKING FIBERS GENERALLY; IT AIMS TO PROVIDE MEANS FOR THE INTERCHANGE OF IDEAS AMONG ITS MEMBERS IN ORDER THAT PROCESSES OF MANUFACTURE MAY BE MADE MORE EFFICIENT AND IMPROVED ALONG TECHNICAL LINES.

Conducted by W.G. MacNAUGHTON, Secretary

Pulp From Different Parts of the Tree*

Comparative Investigations on the Yield and Properties of Pulps Prepared by the Sulphite Process from Moist and Air-Dried Woods from Different Parts of the Tree Trunk

ERIK HÄGGLUND, INSTITUT FUR HOLZCHEMIE, AKADEMIE ABO.

Comparative investigations of the kind outlined in the title of this paper have not been previously carried out, or at least no record of such experiments can be found in the literature. The reason is easily found in the fact that such experiments cannot be conducted on a technical scale because, as is well known, it is practically impossible to obtain two completely comparable cooks. Small variations always result. Another difficulty is connected with the determination of the yield. However, a method has now been developed for digesting wood by the sulphite process in bomb tubes, which renders possible such experiments.

Important Question for Paper Industry

One important question for the paper industry, which deserves attention, concerns the yield and properties of pulp from wood taken from different heights of the tree trunk, and although not of the same technical importance, from the branches. To be perfectly general such a study should consider various strengths of cooking acid, as well as the use of moist and dry wood. In this connection, it is also of interest to determine the sugar yield, since this is of importance in the manufacture of alcohol from the waste liquors.

The Wood

The wood was taken from a 60-year old pine tree, samples being taken from the middle and the top of the log and also from the branches. The wood was split into pieces 3 to 4 cm. long, with an average cross-section of about 4 x 4 mm. One part of each sample was air dried, while a second was placed at once in well sealed glass jars and stored in a cool place. When the air dried wood had attained a suitable moisture content, it was similarly stored.

The Samples Designated

In the following tables, the samples are designated as follows:

A_1 Air dry wood from the middle part of the log.
A_2 Moist wood from the middle part of the log.
B_1 Air dry wood from the top of the log.
B_2 Moist wood from the top of the log.
C_1 Air dry wood from the branches.
C_2 Moist wood from the branches.

MOISTURE CONTENT OF THE WOOD.

A_1	11.76%	B_2	46.53%
A_2	26.92	C_1	9.60
B_1	6.88	C_2	44.96

ASH CONTENT, BASED ON THE DRY WOOD.

A	0.21%	B	0.29
C	0.37%		

(A) PREPARATION OF THE ACID

The acid used in the sulphite cooks was prepared by passing sulphur dioxide into water containing in suspension a certain amount of pure chalk (lime). The analysis of the acid was carried out by the method of Winkler and Höhn.

COMPOSITION OF COOKING ACID.

	I	II	III
Total SO_2, g. per 100 cc	4.53	3.97	5.12
Free SO_2, g. per 100 cc	3.52	2.82	3.92
Bound SO_2, g. per 100 cc	1.01	1.15	1.20
CaO, g. per 100 cc	0.89	1.01	1.05
Available SO_2, g. per 100 cc	2.02	2.30	2.40
Entirely free SO_2, g. per 100 cc	2.51	1.67	2.72
Available SO_2, g. per 100cc., absolutely dry wood	10.10	11.50	12.00
Totally free SO_2	12.55	8.35	13.60
Available CaO	4.45	5.05	5.25

(B) DIGESTION OF THE WOOD

The cooks were carried out in a sealed (bomb) tube. Each tube contained 30 g. absolutely dry wood and 150 cc. cooking acid. The tubes were so compactly filled that no wood could float on the surface during the cooking. They were heated in a mechanically stirred oil bath for 18 hrs., the course of the temperature rise being shown in Fig. 1. (See page 47.)

(C) THE WASTE LIQUORS

Before opening the tubes, they were cooled in snow or ice, in order to prevent loss of sulphurous acid. The liquor was diluted with cold water and the pulp thoroughly washed. The liquor and wash waters were then combined and made up to one liter;

*Translated by Clarence J. West, Chairman of the Committee on Abstracts and Bibliography, from *Der Papierfabrikant*, 23, no. 17, Tech-Wiss. Teil, 279-284 (Apr. 26, 1923); first appeared in *Pappers-och Trävarn-Tidskrift för Finland*, No. 2, 1925.

they were analyzed by the method of Hägglund and Björkman (*Acta Acad Aboensis*, III, 1922). The sugar determinations were carried out according to Bertrand.

A. Composition of the Waste Sulphite Liquors.

	Color		
	I	II	III
A_1	light brown	yellow	yellow
A_2	light brown	yellow	yellow
B_1	brown	brown	yellow
B_2	yellow	yellow	yellow
C_1	dark brown	brown	light brown
C_2	dark brown	brown	brown

B. Available and Totally Free SO_2, g. Per 100 cc., Absolutely Dry Wood.

A_1	7.93	7.05	9.07
A_2	7.93	7.23	9.76
B_1	6.86	6.57	8.80
B_2	7.07	6.81	9.64
C_1	6.60	6.21	7.11
C_2	6.87	6.38	8.92

C. Loosely Bound SO_2.

A_1	2.50	2.45	2.18
A_2	2.65	2.49	2.61
B_1	2.55	2.45	2.17
B_2	2.60	2.47	2.53
C_1	2.86	3.07	2.19
C_2	2.90	3.02	2.54

D. Firmly Bound SO_2.

A_1	9.84	8.30	11.09
A_2	9.71	8.29	10.98
B_1	10.93	8.97	12.54
B_2	10.94	8.76	11.77
C_1	11.18	8.63	13.80
C_2	10.72	8.40	11.94

E. Other Volatile Acids.

A_1	2.15	1.72	2.26
A_2	1.94	1.58	2.12
B_1	2.07	1.76	2.10
B_2	2.01	1.58	2.04
C_1	2.17	1.74	2.16
C_2	1.90	1.60	2.04

F. Non-Volatile Acids (Normality).

A_1	0.33	0.25	0.07
A_2	0.46	0.13	0.11
B_1	0.39	0.23	0.80
B_2	0.53	0.30	0.37
C_1	0.89	0.45	0.94
C_2	0.79	0.50	0.82

G. Sugar (Non-Inverted), g. Per 100 cc.

A_1	16.73	14.00	14.40
A_2	15.86	13.82	14.27
B_1	16.86	15.41	15.62
B_2	15.50	14.60	15.25
C_1	23.16	21.40	19.93
C_2	19.86	18.07	18.94

H. Total Sulphuric Acid.

A_1	3.78	3.14	3.62
A_2	3.78	2.82	3.45
B_1	3.53	2.89	3.19
B_2	3.13	2.76	2.55
C_1	3.08	2.96	3.83
C_2	3.27	3.07	3.36

The pulp was thoroughly stirred into a large volume of water, filtered and pressed dry. The moist pulp was then shredded and dried in a drying oven at 60-70° for 15-20 hours. The air dry pulp was then placed in well sealed glass vessels until it reached a uniform moisture content, after which a small sample was dried at 105° to a constant weight. The lignin determination was carried out by the use of concentrated hydrochloric acid, a method which is preferable to the use of sulphuric acid in this case. The copper number was determined according to Hägglund, and the bromine number according to Tingle.

COMPOSITION OF THE PULP

Expressed in g. Per 100 g., Absolutely Dry Pulp—A. Water Content.

	I	II	III
A_1	2.18	2.67	2.44
A_2	2.37	2.54	2.07
B_1	2.21	2.71	2.44
B_2	2.29	2.67	2.88
C_1	2.23	2.81	2.72
C_2	2.46	2.59	2.13

B. Yield.

A_1	48.99	51.17	49.50
A_2	49.22	52.51	50.43
B_1	47.25	49.46	48.68
B_2	48.72	51.77	49.80
C_1	40.16	43.90	41.29
C_2	41.10	44.79	42.82

C. Ash Content.

A_1	0.22	0.44	0.30
A_2	0.35	0.48	0.32
B_1	0.21	0.36	0.30
B_2	0.37	0.48	0.36
C_1	0.51	0.56	0.62
C_2	0.63	0.60	0.60

D. Lignin Content.

A_1	1.28	1.60	1.13
A_2	1.74	2.18	1.61
B_1	1.44	1.67	1.10
B_2	1.80	2.18	1.53
C_1	4.46	5.49	4.85
C_2	5.00	6.60	4.71

E. Copper Number.

A_1	....	2.42	2.12
A_2	....	2.52	2.16
B_1	....	2.20	2.05
B_2	....	2.52	2.05
C_1	....	2.71	2.02
C_2	....	2.90	2.12

F. Bromine Number.

A_1	....	0.201	0.328
A_2	....	0.161	0.208
B_1	....	0.206	0.328
B_2	....	0.172	0.226
C_1	....	0.132	0.134
C_2	....	0.118	0.129

G. Chlorine Factor.

A_1	....	1.76	1.08
A_2	....	2.20	1.71
B_1	....	1.71	1.08
B_2	....	2.06	1.57
C_1	....	2.69	2.65
C_2	....	3.00	2.76

Beating Test

The beating test was carried out with 2.5 g. of absolutely dry pulp. Previous to the test, the pulp samples were shaken in a flask, three-fourths full of water and glass beads. This is necessary in order to obtain a paper with homogeneous properties. The time of beating was 10 hours. The Schopper-Riegler method was used for the test of the degree of beating. In the preparation of papers from the pulp samples, the same pressure was used in every case.

Degree of Beating of the Pulp.

	I	II	III
A_1	93, 90	96, 95	96, 96
A_2	95, 95	95.5, 97	97, 97
B_1	95, 95	96, 97	96, 95.5
B_2	94, 95	96, 97	96, 95
C_1	94, 95	96, 95	95, 95
C_2	90, 91	97, 95.5	95, 96

Examination of the Paper

Several sheets of paper were made from the pulp of each cook, whose tensile strength, elongation and folding number were determined in the usual manner.

Tensile Strength.

	I	II	III
A_1	8,300	10,000	9,100
A_2	9,200	99,800	8,800
B_1	8,350	9,450	8,800
B_2	7,800	9,600	9,100
C_1	6,700	7,000	6,650
C_2	6,400	7,050	7,700

Elongation.

A_1	3.1	3.4	2.9
A_2	4.5	4.0	4.3
B_1	4.1	4.0	3.0
B_2	4.4	4.7	4.5
C_1	3.0	3.4	3.2
C_2	2.9	3.4	3.7

Folding Number.

A_1	1,400	1,100	800
A_2	1,300	1,300	1,000
B_1	900	800	650
B_2	1,200	1,650	1,350
C_1	55	75	75
C_2	65	80	130

Conclusions

These results show first that pulp with the highest tensile strength is obtained when the sulphite cooking acid contains a large excess of lime and not too large an excess of sulphurous acid. A decrease in the lime content has as its result a greater decrease in the strength of the fiber than that resulting from an

increase in the sulphur dioxide concentration. Further, they demonstrate that the strength properties of the pulps are practically independent of the moisture content of the wood. Air-dried wood gives from 1 to 1.5 per cent smaller yields of pulp than does moist wood. However the pulp from the latter contains more lignin and is more difficult to bleach, a perfectly logical result since the water in the wood must decrease the reaction velocity Wood from the middle of the tree trunk gives about 1 per cent higher yields of pulp than that from the top but the strength of the paper is practically the same in both cases. The wood from the branches, however, shows quite a different behavior. The pulp yield is about 10 per cent lower than that from the trunk wood, and its strength is considerably lower. This is especially noticeable in the folding number, which is only about one-tenth that of the corresponding value for the

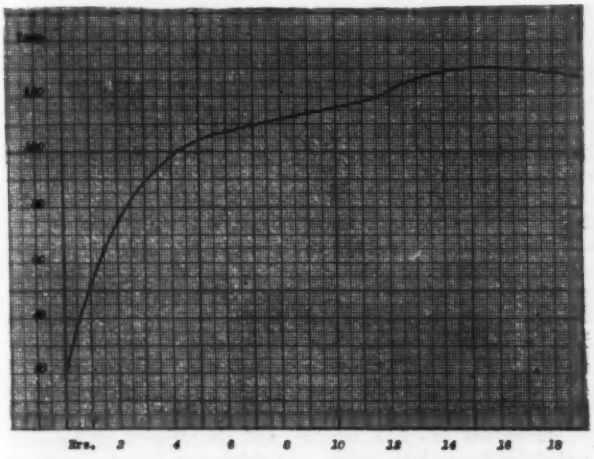

FIG. 1

paper from the trunk. More recent experiments have shown that this difference in the wood from the branches is due to the much more rapid digestion of such wood as compared with that from the trunk. If the digestion is interrupted at the proper time, one may obtain a normal yield of about 50 per cent.

The amount of sugar in the waste liquors is slightly higher from airdried wood. Woods from different parts of the trunk give about the same amount of sugar.

Cascade Paper Co. Completing Addition

STELLACOOM, Wash., July 3, 1925.—Work on the Cascade Paper Company's new $600,000 addition to their plant at the mouth of Chambers creek is progressing rapidly and will be completed before the end of the year. The new improvements include a finishing room of much larger floor space than the present one; a new building of about the same dimensions as the present machine room, that will house the Pacific Tablet Company's equipment; a new office building; a large new machine shop, to take the place of the present one, which will be used for part of the pulping plant, and two new boiler rooms to take care of the greatly increased demand for steam necessary to operate the pulp digesters. Much grading will be necessary in order to make room for the new buildings, and will change the entire topography of the present site at the foot of the Asylum dam.

The high bank along both sides of the gulch on top of which runs the old scenic Henry Hewitt road, will be sluiced away into a retaining wall in the flat below, which will also reclaim a portion of the tidelands. Work on the new project is being done By Strong & McDonald of Tacoma. The paper mill will mean much to Stellacoom.

New Edition of "Fan Engineering"

Those who are concerned with fans and their applications will be interested to learn of the second edition of "Fan Engineering," a handbook for the engineer, architect or student dealing with centrifugal and propeller fans, their properties and applications in the arts and industries. The first edition of this very useful volume was published in 1914 by the Buffalo Forge Company, Buffalo, N. Y., and edited by Willis H. Carrier a recognized authority on air conditioning. In 1920 a second printing was found necessary and the large demand soon exhausted this issue. The present edition, edited by Richard D. Madison under the direction of Willis H. Carrier, is a thorough revision and brings the book competely up-to-date regarding data, general practice and apparatus.

It was thought advisable to keep the general style and size (4½ x 7 inches) as for previous editions. However, in order to include considerable new material and yet not increase the size of the handbook the paper used is Warren's Thintext, producing a volume less than three-quarters inch in thickness despite its 612 pages. The book has rounded corners, gold edges and covers of black flexible Kerotal. The printing was done by the American Lithographic Company, Buffalo, in its new day-light plant, "Carrierized" and "Buffalo" equipped.

In preparing the material for the second edition special effort has been placed upon its general arrangement so that a subject can be readily located and the desired information at once obtained. The book is therefore divided into three parts. The first part deals with the physical properties of air, heat and humidity, the flow of air in general and as regards the fan and systems of air distribution in particular. In order to give to the psychrometric charts the full attention which they deserve these have been prepared in folded form with small scale diagrams on the adjacent pages for graphically illustrating the method of obtaining the desired information. Numerous other tables and charts have been added to Part I. Part II relates to the application of air and air movements to the various classes of work for which fans may be adapted. This part has been rewritten to include valuable research data and current practice in the arts of heating, ventilating, air washing, drying, mechanical draft, exhausting and conveying and miscellaneous other applications. Part III opens with numerous examples of selection of fans and heating and ventilating apparatus, followed by a section on materials, stresses, balance, etc. The remainder of this part contains performance tables and general information concerning fans and fan system apparatus. Although fewer pages are devoted to this section the reader will find a larger list of subjects covered, thus Aerofin heaters have been added, Vento heaters and Carrier air washers data enlarged and other information brought up-to-date. Special consideration has been given to fan performance data which must necessarily be somewhat abridged even in a fan handbook. This has been accomplished in a unique manner by furnishing two complete multi-rating tables; one of the Duplex Conoidal ventilating fan and the other of the Turbo Conoidal stoker fan with inlet guards. Factor tables for other types of fans using the same housings are therefore condensed to a very few pages and are easily applied. In the Appendix will be found typical specifications, guarantees and engineering codes. The A.S.H. & V.E. fan test code is reproduced in full. Several pages of useful data that are particularly applicable to fan engineering are given. The index is very complete and thoroughly cross-referenced.

Books may be obtained from the Buffalo Forge Co., 490 Broadway, Buffalo, N. Y. Price $4.00 per copy.

Box Board Association to Meet July 24

CHICAGO, July 6, 1925.—The Box Board Association has postponed its next meeting from Thursday, July 23, to Friday, July 24.

Current Paper Trade Literature

Abstracts of Articles and Notes of Papermaking Inventions Compiled by the Committee on Abstracts of Literature of the Technical Association of the Paper Making Industry

Clarence J. West, Chairman

Boards

Cardboard Hardening. Christoph & Unmack A. G. Eng. pat. 205,494. To harden cardboard sufficiently so that it may be used as building material, it is soaked in an oil bath under pressure at a temperature of about 20° to 50° C. and air dried. Two or more layers are then glued together and dried at 20° C. Slabs of cardboard so formed can be made into ceilings and walls of barracks, etc., as they have great tensile strength.—A. P.-C.

Waterproof Pulp Boards. R. S. Dickie. Eng. pat. 219,880. In the manufacture of waterproof pulp board suitable for such purposes as roofing, the husk fiber of the rice plant (*oryza sativa*) known generally as paddy husk, is used, with or without the addition of a small percentage of long fibered material such as hemp, jute, esparto, etc. The paddy husk is treated with caustic soda and then with alum, and is pulped in the ordinary way; 10% of long fibered material is added, and the material made up into sheets stuck together with a bituminous solution, or with layers of bitumen, forming a board which may finally be coated with the bitumen, and the outer surfaces dusted over with talc powder. The board may be corrugated.—A. P.-C.

Process and Machine for Making Cross-Corrugated Board. C. H. Crowell. U. S. pat. 1,504,218, Aug. 12, 1924. A sheet of paper or board is corrugated longitudinally by means of circumferentially corrugated rollers, and another sheet of paper or board is corrugated transversely. The two corrugated sheets are united by means of a lining sheet to which both are glued so that the corrugations are at right angles in the two sheets, and a facing sheet is then glued to each mace of the composite sheet, which is then passed through a drier where hot air is pased through the transverse and longitudinal channels to dry the adhesive. Means are also provided to cut the assembled and dried paper board into sheets.—A. P.-C.

Method of and Apparatus for Impregnating Pulp Articles. H. Parker and O. B. Brown, assignors to Brown Co. U. S. pats. 1,488,974 and 1,489,001, Apr. 1, 1924. The articles, more particularly tubes, are placed in cages with perforated top and bottom walls and placed in a battery of treating tanks. The impregnating liquid is pumped from a common storage tank to a series of charging tanks (one for each treating tank), and from there into the treating tanks. It is circulated in the latter by drawing off at the bottom and delivering tangentially at the top of the same tank. The connections are so designed that any tank can be cut out individually for emptying when the tubes have been thoroughly impregnated, and impregnating fluid is automatically supplied to make up for what is absorbed by the pulp articles, and the pressure is automatically kept constant. The liquid is kept hot by steam coils in the storage, charging and treating tanks; and the temperature in the treating tanks is kept constant by means of thermostats (one for each treating tank), in which the steam inlet valve and the exhaust valve are opened or closed, according as the temperature falls or rises. No. 1,488,974 covers the apparatus and No. 1,489,001 the method.—A. P.-C.

Making Cellular Board. I. Hill and P. A. Dinsmoor, assignors to Lawrence Paper Manufacturing Co. U. S. pat. 1,473,096, Nov. 6, 1923. When relatively thick straw board is put through corrugating rolls, the fibers break, rendering the board practically unfit for use. The inventors overcome this by passing it through a chamber where it is subjected to the action of steam nozzles on both sides of the sheet, and then corrugating it immediately after it comes out of the "tempering" chamber. It is then lined on one or both sides to make single or double faced corrugated board.—A. P.-C.

Apparatus for Making Fiber Board. J. K. Shaw assignor to C. F. Dahlberg. U. S. pat 1,477,288, Dec. 11, 1923. The stock is fed to a wire in a direction perpendicular to the line of travel of the wire, resulting in a loosely assembled, fairly open mass of fibers, more compact next to the wire than away from it. There are two wires, on which are formed two layers, forming the outside of the finished board, while stock is also fed between the two wires, before they come together, forming the central portion or core of the board. Provision is made for adjusting the size of the channels through which the stocks are delivered to the wires, thereby varying the thickness of the core and of the outer layers. Different kinds of stock may be fed in the three channels.—A. P.-C.

Insulating Material. H. F. Weiss assignor to C. F. Burgess Laboratories. U. S. pat. 1,489,567, Apr. 8, 1924. Fibrous material is shredded, i.e., divided as much as possible into its elementary fibers, while in a dry condition, and the dry fibers are delivered on to a travelling wire cloth. The fibers are treated with a suitable adhesive, either by applying after deposition of the fibers on to the wire, or else by delivering them on to the wire through a mist or spray of the adhesive, thereby coating each individual fiber. A suction chamber is provided under the wire at the point of feeding the fibers. The resultant sheet is put through a drying chamber, coated on one side with moisture and air resisting coating (e.g., asphalt, coal tar, pitch, rubber, etc.), dried, coated on the other side, dried and finally reeled. By suitably selecting the adhesive for cementing the fibers together, the resultant fibrous mat can be rendered fireproof, ratproof and moisture-proof.—A. P.-C.

Process of Corrugating Pulp Board. D. M. Sutherland, Jr., assignor to The Agasote Millboard Co. U. S. pat. 1,497,809, June 17, 1924. The invention relates especially to corrugating relatively thick pulp board (e.g., 3/16 inch) containing a large percentage (35% or more) of pitchy, bituminous or resinous materials. The compacted sheet is heated to a temperature of about 300° F. and passed through a series of steam heated corrugating rolls, the depth of the corrugations of the rolls increasing gradually from the first pair to the last. If an accurate shaping of the finished product is desired, it is further treated between heated forming dies of a shape corresponding to the finished form desired. In the latter case the board is fed through the machine intermittently, the motion of the rolls and of the forming dies being synchronized so that the rolls feed just the right length of board while the dies are separated, and they are stationary when the dies are brought together.—A. P.-C.

Process of Making Ivory Fiber Board. H. M. Castner. U. S. pat. 1,499,291, June 24, 1924. High grade bleached sulphite is mixed with 10% of paraffin (preferably in the form of paraffin paper or of paraffin waste), beaten for an hour or more, diluted with water, mixed thoroughly, and made into sheets of suitable thickness on a wet machine. The sheets are dried in a moist atmosphere to prevent them from becoming hard and brittle, and are finally subjected to a very high pressure. The product is claimed to be flexible and elastic, and free from all danger of splitting or cracking, and is suitable as a leather substitute in the manufacture of white shoes.—A. P.-C.

Machine for Making Fiber Board Suitable for Making Plaster Board. J. K. Shaw. U. S. pat. 1,500,209, July 8, 1924. The stock, at a consistency of 1% to 5% is fed under a constant hydrostatic head into a tank, and forms into two separate layers on a

cylinder mold and on an endless travelling wire, respectively. The two layers converge and are intimately knitted together by additional fibers of the stock in the tank, thereby producing a single homogeneous sheet or board which can be made of any desired thickness. Suitable seals are provided to prevent leakage of stock, and provision is made for carrying away the water passing through the wire and the cylinder mold. Means are also provided for the formation of undercut recesses or grooves in the sheet, which serve to hold or "anchor" a layer of plaster to be subsequently applied.—A. P.-C.

Machine for Coating Cardboard and Other Materials. A. Potdevin, assignor to Potdevin Machine Co. U. S. pat. 1,497,196, June 10, 1924. A roll rotating in the coating bath transfers the coating material to the sheet which is pressed in contact with the transfer roll, which eliminates the tendency of the coating film to drag and spread back on the surface of the sheet. A "diverter," consisting of a flat or curved strip of sheet metal extending across the full length of the tank, is placed under, and fairly close to the coating roll, so that there is a small space between the roll and "diverter" and a relatively large one between the "diverter" and bottom of the tank. This causes proper circulation of the coating bath by the rotation of the roll, and prevents "piling" of the liquid in the tank on the side of the doctor roll, with consequent danger of overflowing.—A. P.-C.

Machine for Making Double-Faced Cellular Paper Board. G. W. Swift, Jr. U. S. pat. 1,492,490, Apr. 29, 1924. This is essentially an improvement on U. S. pat. 1,263,000 of Apr. 16, 1918, for making single-faced corrugated paper board The paper or board is first passed between corrugating rolls placed vertically above each other. It passes around the lower corrugating roll and a pasting roll applies adhesive to the crowns of the corrugations. The sheet next passes around a smooth roll under and in contact with the lower corrugating roll; and one of the facing sheets is applied to the corrugated board at the top of this roll, and the second facing sheet is applied at the bottom of the roll, the second face of the corrugations being glued as it passes downwards along the side. Means are provided for adjusting and equalizing the tension of the facing sheets. The double faced board is then dried in contact with flat heated steel plates, and cut, preferably by means of the cutter described in U. S. pat. 1,343,487, of June 15, 1920. This machine is claimed to eliminate all tendency of the finished sheet to curl or warp.—A. P.-C.

Method of and Apparatus for Making Fiber Board. J. K. Shaw, assignor to C. F. Dahlberg. U. S. pat. 1,500,208, July 8, 1924. This invention is an improvement on the machine described in U. S. pat. 1,477,288 of Dec. 11, 1923. In order to be able to use relatively short and large-mesh wires without excessive loss of fibers, especially when a short-fibered stock is used, a short, fine-meshed wire is placed immediately back of each of the main wires at the end at which they first come in contact with the stock. This allows the fibers to be deposited without much loss through the wire, and the layer thus formed prevents loss of fibers further along the wire, where the coarse wire is not backed by a finer-meshed one.—A. P.-C.

Machinery

Wood Preparing Equipment. Harry E. Weston. *Paper Ind.* 6, 79-84, 315-320, 504-507, 688-693, 861-866 1043-1047, 1219-1222, 1393-1395 (Apr. to Nov., 1924). A detailed description of various types of wood room equipment, covering log haulups and slashers, cutoff saws, disk barkers, barking drums, chippers, splitters, chip screens, ship crushers and rechippers.—A. P.-C.

Pulp Screen. J. Paramor assignor to Watford Engineering Works. U. S. pat. 1,509,024, Sept. 16, 1924. Each end of the rotary screen drum is joined to the corresponding end of the pulp vat by means of a rubber diaphragm, but between the drum and diaphragm is a rubber-canvas, rawhide, etc., liner, which is held against rotation with the drum, and which prevents leakage of the pulp between the drum and diaphragm.—A. P.-C.

Purifying Pulp. H. Thomassen. Eng. pat. 220,139, July 14, 1923. In purifying pulp before it flows to the paper machine, the pulp is delivered to a centrifugal machine, in which the heavier impurities collect at the side and are retained there. The lighter impurities are retained by a ring somewhat smaller in diameter. The purified pulp flows between the side and ring to a stationary receiver and from there to the paper machine. Coloring matter and fillers can be mixed with the pulp in the apparatus. By regulating the flow of pulp to the apparatus, the thickess of paper formed on the paper machine can be adjusted.—A. P.-C.

Screen for Paper Stock. R. S. Clarke assignor to Bird Machine Co. U. S. pat. 1,494,529, May 20, 1924. The invention provides for a spiral-shaped flange or blade encircling the drum of an inward-flow rotary screen. Owing to the rotation of the screen this blade gathers the "rejections" and drives them to one end of the screen, the head of which is provided with a skimmer blade which lifts them and throws them out through a discharge opening provided for the purpose. The blade also pushes towards the end any rejections which have a tendency to float, and thus materially assists in keeping the tank free of larger particles. Removal of the screenings in this manner increases the efficiency of the screen, and reduces the frequency of draining the tank for cleaning it.—A. P.-C.

Feltless Wet Machine or Cylinder Machine. A. J. Haug assignor to Improved Paper Machinery Co. U. S. pat. 1,493,536, May 13, 1924. The stock is delivered from above on to a cylinder mold, the water which passes into the cylinder mold passing out again at the bottom and collecting in a drip pan. The couch roll is placed beside the cylinder mold (the axes of the couch and cylinder mold being in substantially the same horizontal plane). A second cylinder mold is provided below the couch, and a second couch beside the second cylinder mold. In order to lift the sheet from the first couch on to the second cylinder mold, the latter presses against the couch more strongly than the couch against the first cylinder mold. Additional cylinder molds and couches can be provided if desired, the sheet being picked up by the succeeding rolls by increasing the pressure from one roll to the next, and is removed from the last roll by means of a suitable doctor. The couch rolls have a hard, smooth surface to press out as much water as possible, and the cylinder rolls must be of very substantial construction to withstand the high pressures to which they are subjected.—A. P.-C.

Wet Machine or Cylinder Paper Machine. A. J. Haug assignor to Improved Paper Machinery Co. U. S. pat. 1,493,537, May 13, 1924. A perforated roll is pressed against the couch with sufficient pressure to pick off the sheet, the water which is pressed out of the sheet passing inside the perforated roll. The latter is preferably built of a number of spiders assembled on sleeve which is mounted on a shaft, and the circumferential edges of the spiders provide a series of supporting rings covered by a perforated sheet metal covering. A second couch roll with a hard smooth surface is provided above the perforated roll, and is pressed against the latter with sufficient force to pick off the sheet. To prevent clogging of the performations by fibers which pass into the rolls with the white water, the overflow of the trough through which the water is drawn off is adjusted so that the lower portion of the roll is immersed in the white water, which washes it free of fibers.—A. P.-C.

Liner for Jordan Refiners. W. Werner assignor to Noble & Wood Machine Co. U. S. pat. 1,500,170, July 8, 1924. The object of the invention is to provide a simple and effective means for fitting and locking a one-piece cast metal shell liner in the shell of a Jordan engine. As there frequently is a slight difference in the taper on which the shells are bored, in order to avoid having to turn each separate liner to fit the taper of a given individual engine, a self-centering shimming locking ring is provided. At the end the liner is turned for a short distance parallel to its axis, and the inside of the self-centering shimming ring is also substantially parallel to the axis and of diameter equal to or slightly greater than the large end of the liner, while the outside is turned to the same taper as the

shell. Any difference between the diameter and taper of the shell and liner is automatically compensated for by the shimming ring, which has the further advantage of being self-centering.—A. P.-C.

Beater Roll Adjuster. C. W. Unkle assignor to The Griley-Unkle Engineering Co. U. S. pat. 1,499,131, June 24, 1924. Suitable gearing is provided so that the lighter bars may be lowered or raised by the rotation of the beater roll to a given point, and when this point has been reached the mechanism is automatically thrown out of action until again started for further adjustment or for reversing the movement of the roll.—A. P.-C.

Straining Wheels for Washing Engines. M. E. Boehm. U. S. pat. 1,496,517, June 3, 1924. The straining wheel is built up of screen plates and is shaped like two frustrums of a cone joined together at their large ends. An open horizontal trough extends through the wheel and is provided with an upwardly extending rear face on the side towards which the water approaches in its normal travel in the trough. A series of V-shaped troughs are provided inside the wheel to raise the water and discharge it into the central horizontal trough, whence it passes out through the hollow trunnions. Vanes are secured to the outside of the wheel. The side of the trough in which the straining wheel (or preferably two or three of them) is placed, is narrower than the side in which the roll is placed, so as to increase the velocity of the stock, which drives the straining wheel by means of the vanes without having to use any other power.—A. P.-C.

Method of Mounting Beater Roll Fly Bars. C. W. Shartle U. S. pat. 1,494,446, May 20, 1924. The principle of the method consists in mounting the fly bars on the beater roll heads by means of interlocking devices of any suitable shape shrunk on lugs or in depressions formed on the beater roll heads, and engaging the fly bars singly or in sets, in a manner which serves to interlock them with the heads.—A. P.-C.

Filler or Liner for Jordan Engines. H. D. Martindale assignor to Shartle Bros. Machine Co. U. S. pat. 1,494,265, May 13, 1924. The liner is built in (preferably) three units, one for the small end, the second for the center and the third for the large end of the jordan. Each unit is built up of alternate flay bars and filler blocks, which are notched at both ends so as to form two circumferential grooves. In each groove is laid a heavy wire to act as a retaining hoop, and the grooves are then filled with a composition metal to imbed the retaining hoop. In building up the unit, a longitudinal opening is left between the otherwise coinciding longitudinal edges of the conical body, and a wedge block is inserted into this opening for the purpose of expanding the unit when in position in the shell. The wedge is preferably slotted to enable it to be secured to the interior of the shell by means of a screw. This construction allows of rapid replacement of the filler, and also eliminates the necessity of using an anchor or locking bar.—A. P.-C.

Method of Watermarking Paper. W. Cross. Eng. pat. 219,-541. The essential characteristic of the invention resides in an endless wire screen (or a wire cylinder) above the usual wire. The pulp is delivered to the upper wire which carries the watermarking devices, and is deposited therefrom on to the ordinary paper machine wire at the breast roll. Both the upper and lower wires are shaken, in such a manner that the shake is the same at breast roll where the two wires come in contact with each other. The upper wire or cylinder may be provided with a protecting wire cloth.—A. P.-C.

Use of White Water. Phillips Dennett. *Paper Mill* 48, No. 43, 35, 40, 42 (Oct. 25, 1924). A discussion of the advantages of white water utilization.—A. P.-C.

Defects in Paper. *Paper Mill* 48, No. 46, 4, 10 (Nov. 15, 1924). A discussion of the causes of and methods of overcoming: non-uniform weight or bulk, stretch, fluffy or dusty surfaces, poorly cut edges, wrinkles, thin edges, improper sizing, curl, dirt and deficient packing.—A. P.-C.

Formation Table for Fourdrinier Paper Machines. H. L. Kutter, U. S. pat. 1,492,379, May 29, 1924. Below the wire, extending from the breast roll to the first table roll is a transverse plate extending across the full width of the wire, which is perforated, preferably in the form of elongated slots placed to form series of staggered transverse rows. This plate, or "formation table," prevents too rapid draining away of the water from the fibers between the breast roll and first table roll, and prevents distortion of the fibers which very rapid draining tends to produce.—A. P.-C.

The Formation Table. J. Melrose Arnot. *World's Paper Tr. Rev.* 82, 1402 (Oct. 4, 1924); *Paper* 35, 140 (Nov. 13, 1924). Kutter's formation table is not new, having been in use in Europe for at least the last 20 years; and it is doubtful if it gives the results expected of it. The author, having worked a machine both with and without the formation table, could not detect any appreciable difference in the results. It has the advantage of eliminating the possibility of getting a barred sheet from bent tube rolls in the neighborhood of the slices.—A. P.-C.

Method of Mounting Paper Machine Breast Rolls. A. Aldrich. U. S. pat. 1,494,567, May 20, 1924. The rails supporting the table roll bearings are preferably in the form of channel bars. The breast roll is mounted on a sliding frame or carriage composed of two sliding members, preferably in the form of channel bars which form the supporting rails for the table rolls. The ends of the bars constituting the carriage are saddle shaped and carry the breast roll bearings. When the machine is running, the breast roll carriage is drawn out as much as possible, being clamped in position by means of bolts. To change the wire, the last few table rolls (about three or four) are taken out of their bearings, the breast roll carriage is loosened and run in (towards the couch roll), and the end of the wire lifted up and the table end passed through it.—A. P.-C.

Paper Machine Slice. C. E. Bruner. U. S. pat. 1,497,403, June 10, 1924. In order to diminish or eliminate eddies and "boiling" as the stock passes from under the slice a lip is provided at the bottom of the slice. The lower face of the lip is inclined downwards toward the apron board, and the inner lower edge (toward the pond) of the lip is rounded instead of sharp. Vertical rods are provided at intervals along the length of the slice, the lower ends of which are seated in bosses on the lip of the slice, while the upper ends are threaded and journalled in a flange at the top of the slice and are each provided with a hand wheel. By manipulating the latter, minor adjustment to the lip can be made in a vertical plane, without affecting the angle of inclination of the lip toward the apron board.—A. P.-C.

Doctor Controller for Paper Machine Driers. J. J. Malicke. U. S. pat. 1,500,952, July 8, 1924. A hand lever is secured to one end of the doctor shaft by means of set screws. It is connected by means of a link to an arm pivoted to a bracket on the machine frame. A coil spring is attached at one end to a pin on the link and at the other to a pin on the arm, the positions of the pins being adjustable to vary the tension of the spring, and consequently the pressure with which the doctor presses against the roll. By displacing the end of the hand lever, the doctor is raised from contact with the roll, but falls back into position as soon as the lever is released. By pressing down the end of the arm pivotted to the machine frame the arm and link become substantially parallel, raise the hand lever, and consequently the doctor also.—A. P.-C.

Suction Device for Paper Machine Press Rolls. H. L. Kutter. U. S. pat. 1,494,432, May 20, 1924. In order to remove the water which always accumulates just in front of the nip of the press rolls, the space between the felt and one of the rolls is made into a vacuum from which the water is exhausted. This is accomplished by mounting a chamber, of the same length as the rolls, so that it extends close to the nip of the rolls, and is open along this edge. The lower and upper lips of the opening are made to contact with the lower press roll and felt, respectively, and an adjustable plate at each end completely encloses the space. The chamber is suitably connected to a suction pump.—A. P.-C.

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To Make Survey of Binder Board Industry

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., July 8, 1925.—A survey of the binder board industry has been begun by the Simplified Practice Division of the Department of Commerce. In this connection William A. Gately of the Division who is handling this problem is sending out a letter to the trade asking certain information. The letter follows:

"At the request of the Binder Board Manufacturers Association and several representative manufacturers, this Division is undertaking a survey of the industry to determine just how great a variety of products now exist.

"From personal discussion with a few of the manufacturers and distributors, the writer has learned that possibly 80 per cent of the business is done on a quarter or less of the sizes and thicknesses now turned out. Unquestionably, this is a costly and expensive method of manufacturing, and one which could advantageously be modified.

"The elimination of items for which there is comparatively little call would mean longer runs, less time lost in set-ups, the carrying of smaller stocks, smaller capital investments, reduction in warehouse space, labor, insurance, and overhead, all of which means bigger profits to the manufacturer, and the turning out of a more satisfactory product at lower cost for the customer. If these advantages are worth having, they are certainly worth making some little effort to achieve.

"Before any real progress can be made the facts of the situation must be accurately determined. This can be done only by a careful survey of present products. Therefore, will you send me, on or before August 1 at the latest, the following information:

1. The total number of bundles of Binders Board sold (for whatever purpose used) over the year 1924.

2. The total number of bundles to be divided into all the sizes sold, and all the sizes in turn to be subdivided into the numbers in each size sold.

"When this information has been received, it will be tabulated and a complete report pepared showing the various sizes, number, and quantity of each size and number made by the trade as a whole. Totals for the entire industry alone will be used, and the information supplied by each manufacturer will be kept strictly confidential. When this information has been compiled, it will be distributed to all manufacturers, and at a meeting in September a set of recommendations can then be presented to the distributors and organized consumers, after which a program satisfactory to the entire industry can be worked out.

"Please advice me at once if you will cooperate with us in this matter, and whether or not we can rely upon your supplying us with the information requested not later than August 1, 1925."

To Ship Pulpwood from Tupper Lake

TUPPER LAKE, N. Y., June 29, 1925.—McCarthy Brothers, lumber contractors who were in charge last winter of cutting nearly 30,000 cords of pulpwood on the Litchfield tract near the head of Big Tupper Lake, have leased from the International Paper Company a tract of land near the New York Central Railroad at Underwood and will at once install a jackworks, the machinery for which was purchased at Carthage.

A quarter mile stretch of double track siding will be laid from the main line to the shores of Raquette River and 30 cars of pulpwood will be loaded daily for shipment to the St. Regis Paper Company mills at Watertown. The vast log drive comprising this deal is now in Big Tupper Lake, partly floated down the Raquette River towards the new jackworks.

A force of experienced log drivers will be required all season to drive and load the 24,000 cords of pulpwood still in the water and operations may extend into the early part of next year.

It was orginally intended to load these logs at a jackworks on the shores of Raquette Pond and a contract was let to the Oval Wood Dish Corporation therefor, but this project has been abandoned due to confliction with other logging interests.

Section of the

COST ASSOCIATION OF THE PAPER INDUSTRY

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Conducted by THOS. J. BURKE, C.A., Sec-Treas

Five Elements in Making a Profit*

Industrial Engineering Is Common Sense Management Requiring Knowledge, Incentives, Planning, Proper Personnel Relations and Right Marketing Principles

By Col. B. A. Franklin, Vice-Pres. of the Strathmore Paper Co., Mittineague, Mass.

I always speak with considerable trepidation to business men on industrial engineering, because I have the impression that somehow or other just exactly the right idea of what industrial engineering is has not always been conceived. A good many business men think that industrial engineering is something fancy, sort of the trimmings that a successful company may be willing to put on at a certain expense. I have heard pretty good business men speak of industrial engineering as some kind of a buncombe, or to use our American compression of the word, bunk.

As a matter of actual fact, industrial engineering is purely and simply common sense, an intimate study of proper business methods and their application.

Probably the reason industrial engineering has not been thoroughly understood is, because so many business men and so many successful business men go through a very considerable experience, sometimes rising from the lowest position, and get a very definite and complete confidence in their own judgment, in their own common sense and consequently get the idea that their experience working towards success has been ample, and if they depend on their judgment, their common sense and their experience, they have all of the elements that are necessary to operating a perfectly successful business. I am not going to pretend for a moment that there are not a very great many successful businesses so operated.

Success from Knowledge of Management

The only point that I want to make, because I believe it, and because I think I have had enough experience to know that it is so, is this: That any business operated after a study and an understanding of the principles and methods of industrial engineering can be carried on more successfully, can be made more permanent, because industrial engineering very essentially involves the very best business methods. I often wonder when a master printer engages some expert workmen and investigates his qualifications and inquiries of him just what he knows, and what he can do, and finally engages him on the basis of his knowledge, if that workmen could then turn around and begin to quiz the master printer and ask him what he knows about the printing business and the principles of operation of any good business, whether the workmen would be as well satisfied as possibly the master printer is with the replies of the workman. I put that in a personal way, not because it applies to printing, particularly, but because it applies to any business, because after all the head of a business is assumed to know the very latest and very best principles on which a business can be operated. A definite knowledge of industrial engineering is involved if the head of the business is to know how best to conduct the business.

Of course, in the half hour I have I am not going to make any pretense of being able to cover this subject in any thorough way. I am not sure that I could do it if I had all day. So I shall divide the question of industrial engineering consideration into five separate elements.

Five Elements of Industrial Engineering

The first of these is *knowledge*. I have always thought of a business as being pretty complicated affair involving a great many operations, involving usually, or quite frequently, a number of men with different temperaments, with different ideas, with different ambitions, involving wastes and handling of material and machinery, and, in fact, involving even in one day a very considerable amount of detail. I have never been thoroughly able to understand how any man could control that detail and move it in the right direction and move it with the utmost celerity and economy, without having a knowledge of what is going on.

A good many employers would answer that by saying that they do have a knowledge, but as a matter of fact, no man can have very much knowledge of what is occurring in his business unless he can see everything or unless he has a cost system which tells him in very definite figures precisely what is happening. It has been always a mystery to me why so many businesses make so slow progress in the knowledge of their business through costs, through records of all kinds. It has always seemed to me that common sense and business judgment are tremendously essential for the best operation of a business, but that common sense and business judgment would be very much enhanced if, instead of depending either on personal knowledge or the knowledge of those down the line to whom authority is delegated, that common sense and business judgment could have in front of it records and costs as a definite basis for consideration. I have seen so many cases where the knowledge did not exist, where even the best common sense and judgment was very much at fault and so many cases where the knowledge did exist which common sense and judgment could utilize to the greatest advantage whatever the ability back of it, that I have become thoroughly convinced no business man has a right to make a profit, has any more right to make a profit without a definite

* From United Typothetæ Bulletin.

knowledge of his business than a bootlegger has a right to make a profit in these days on liquor.

Your answer may be that a good many bootleggers do make a profit, and consequently the business man ought to be justified in making it, even if he does not have costs and statistics.

Set Up Standards

If you are going to have costs, if you are going to have statistics, if you are going to operate your business with a definite knowledge, iudustrial engineering advises you first to make very definite standards, to prefix through standards what things ought to cost you, what production you ought to get, and what wastes you ought to have. In other words, if you would start out with a calculated cost, with a definite knowledge of what different operations and different methods ought to produce, then the cost figures will be very much more useful, because they will begin to show you where you are falling down in reaching those standards. Therefore, the first division of industrial engineering, as I see it, is that a business man, if he is going to make a profit, must have a running series of costs and records to show him how closely he is approaching his standards, and where he is falling down, so that he may be able to exercise his common sense and business judgment in remedying the situation.

In a print shop, the first essential thing that a cost system ought to tackle is the machinery hours. In all press work, in all printing plants, I assume the major element you deal with is your press hour. If you would get the maximum out of your press hours, undoubtedly you are tackling the major problem in your business. In our business, at least, we know precisely of every press every day how many production hours the press operates, and when I say production hours I mean the number of hours that the press is actually turning out printed impressions. Operating with that knowledge we are constantly striving to get the maximum number of impression hours out of all of our presses. We are constantly comparing the number of impression hours that we do get with what seems possible from other presses, which are constantly offered us, as they are offered to you, of course. It is necessary in a business not merely to know what is the best that your machinery can do, but it is advisable to know what is the best your machinery can do as compared with what the best machinery on the market can do, so that you may know whether you are approximating the possibilities which a number of your competitors have.

On our machines we have electrical records which operate only when actual impressions are being made, and our foreman has in front of his desk a sheet running all the time, showing him whether the presses—and we have got about seven or eight of them—are actually producing printed impressions, or whether they are idle or running without producing impressions.

Another thing that is very important in a print shop is to know the per cent of waste. We know every week, we know on every job, what per cent of waste there is. We know what per cent of waste to expect, because we know what the lay-out is, and we know what we ought to get. We have found by following that very closely it is possible to materially reduce the waste.

A third element which has always seemed important to us, is to know how many poor impressions we get. Any good knowledge of a business, which is the first element in industrial engineering, would give the head of a business a picture of what he was getting out of his presses in active machine hours, what he was getting out of his paper in printed paper and in good impressions, and if he operates on any basis of standard he has through his cost system a very definite means of watching his situation and improving it.

Incentives

A second group of methods in industrial engineering which apply to any business is that of *incentives*. I don't know how much the conditions of your particular business would be affected by incentives, but I do know positively that any man, including the master printer himself, does better work when it is worth his while to do better work. We strive for a profit, and because some of us may have happened to have an interest in the business we think the profit idea may apply very distinctly to us, but that is not so. It is human nature for any man in business, whether he occupies the highest or lowest position, to want to get more, and a very definite method of industrial engineering, in order to make the doing of more possible, is to set up incentives for people whereby they can get more for various and sundry results.

There are a number of ways that can be done in a print shop. I say it can be done because we do it. In the first place, it is possible to fix a fair standard number of press hours which ought to be utilized entirely in making impressions, and if the working man improves the figure set, then he gets a definite bonus for doing it.

It is also possible (and we used to have this method but discarded it) to pay on the number of impressions made per hour, utilizing some standard time when the job ought to be done, and paying the man an increased rate, provided he increases the average of impressions expected.

It is very possible to save waste by fixing on each job or by making the whole proposition a gang proposition and fixing for each week a per cent of waste, the waste to include not only the cuttings but all the bad impressions, and paying a definite bonus over the improvement of that per cent. Even where the day rate is rigidly adhered to, it is possible to give either individually, or to give the whole press room gang a definite bonus for improving the weekly production and for improving the wastes made.

Planning and Production

A third group of methods in industrial engineering would have definitely to do with *planning and production*. I assume you gentlemen know already a great deal about such a proposition. It would seem ridiculous to the ordinary man of common sense and business judgment to expect to operate any plant whatsoever on the very best basis unless the work was very carefully planned and yet I have been in print shops where the pressman comes in and wants to know what job he shall tackle next.

It is a very simple thing to plan a shop as far ahead as there are any jobs whatesoever to do, to plan them in detail. I have no doubt a number of you gentleman operate what I have seen in some printing plants, a definite planning board, where all the jobs are set up under the different presses and under different operations, and laid out very definitely as to the time when certain operations ought to be ready, in order to carry on to the next.

Unquestionably, there is very much to be obtained from men when they know well ahead what is laid out for them, and what is expected of them. No manufacturer of any kind of product has a right to make a very good profit unless he so plans and prepares all of his work definitely ahead of time, so that every man knows what he has to do, so that all of the operations fall in like a roll in a revolving wheel, so that everything is ready when it ought to be ready, ready before the time it ought to be ready, and so that the whole thing moves ahead very smoothly.

That is a very simple proposition, and once it is undertaken, a very good way to make it effective is promising the delivery of each job. I know one firm acknowledges all of their orders by advising the customer to the very day when he may expect to get his job delivered. The advantage of that particular method is that if a man makes it honestly—and I don't know what a man, no matter how honest he is, can be more dishonest in than in his promises, because of the optimism of man generally,—but if he makes a promise to his customer, he is inclined then to fit the promise into his definite plan, to prepare for it, to follow it up and know if he is falling down, and what he has got to do to improve the situation. That will compel him automatically if he endeavors honestly to carry out his promise, it will compel him automatically to improve the situation in every way to keep his men on their toes, to keep everybody informed so that they may help him carry the thing out, not for himself but for the whole shop.

So that planning and preparation is a tremendously essential element in making a profit in any business, and it ought to be carried out to the utmost detail, and the utmost information to everybody concerned so that they may throw in their abilities and desires and willingness to carry out that which is promised for the shop.

Of course, in the planning and preparation there would naturally come foremost effectiveness in the planning of the time of the men. One of the principles of scientific management is that a most important thing is to keep the highest paid men operating only on those things which they can do best, and to pass down generally to lower paid men those operations which will save the time of the highest paid men, in order to make the most of the payroll.

Personnel

Now, the fourth element in this question of industrial engineering is the question of *personnel*. After all, we are only gradually coming around to the understanding, which is a profit-making understanding, and not merely a humane one, that those who throw their lots in with us in the prosecution of any business, in the making of a profit, are owed generally something more than mere wages. After all, if you are going to get the best results from any man or any woman, that man or woman must be made reasonably happy. They must feel that after all you have a larger interest in them generally than merely getting the most out of them, for the wage you pay them. The old idea that any business was contained inside the fence or inside of the building is gradually vanishing. Business is being looked upon more and more as a world service, not only a world service to people who buy, but a world service as a center of operations, whereby those in the employ of the business have an opportunity to come to this center and render their share of the world's service. More successful business men who are making satisfactory profits are discovering that they can do so very much more readily if they do for their people those things which opportunity or possibility ambition or ability does not permit them to do for themselves. A great many concerns are branching out in very many different ways to see what they can do for their people in order to make them happy. Very briefly, there are such things as helping them to get a home; as having a club for them. I don't mean an actual residence, but getting them together to work for their mutual interests or outside interests, as well as their inside interests.

There is growing in America today the plan of selling to the employee some interest in the company in a small way; possibly, so that they may feel any success which they help to make may, at least, in some degree come to them.

I am speaking of these methods very briefly. I can't do any more in the short time allotted. There are magazines, there are books, there is literature of all kinds which deals with these things. It seems to me that if a master of a business shall expect the good workmen to study his particular art, his particular trade, and to know something more than he may merely pick up in his experience, and is willing to reward him as his ability increases, he ought to expect of himself that he shall keep in touch with the literature of the progressing day, because this is a progressing day, in order that he may familiarize himself with the principles of business management generally, which are advancing all the time. There is very ample literature on that subject.

The Question of Marketing

The fifth element in industrial engineering, and the last one, by my division is *the question of marketing*. I know that is a very pertinent question with the printer. Not particularly with the printer—it is a pertinent question with any business whatsoever. It is a very pertinent question for two reasons: first, because the growth of the business depends very largely on the methods of marketing, and second because the profits of a business depend very much upon the methods of marketing.

I'd like to present this idea as a fundamental for marketing. A great many business men, in no sense confined to the printing trade, think of a business as merely a means of making a profit, and that that is fundamental. That is what is to be expected from a business, but it seems to me that the only reason for existence of industry, of business generally, is that they may be of service; and I think that the higher the ideals of service in a business, the more a business man understands the purpose of his business in this great industry of ours, and its peculiar purpose is a service, the more it is possible, where good ability, where business sense and business judgment is possessed, the more it is possible to make a great profit.

In hearing printers talk—and it has been my pleasure even if it may have been their misfortune, to have talked to printers all over the country—the thing they have voiced to me is competition. In making their prices they are worrying about what the other fellow is going to charge, and they are very anxious to charge a price which will prevent the other fellow from getting the business away from them.

Of course, I can understand that is not peculiar to the printing business, but it seems to me that in the printing business there is a rather greater opportunity than in a good many businesses that I know about to stress the idea of service, rather than to stress the question of price.

Know Little About Printing

I am going to make the statement—I don't know how much you gentlemen are going to believe it—that most of your customers know very little about printing, that most of them know very little about the effect which is to be created by the printing or how to obtain that effect. There is a vast amount of printing done on factory forms, and the like, but I have in mind now particularly a great and growing business, the mail order business, the direct mail business advertising and correspondence. That is a very large business. I don't know how large it is, but I have heard figures which range very, very high, and it all goes through printers. A great deal of it is wasted, and it is wasted, I think, because the printers who do it have not developed the proper sense of the service idea, and so when the customers come in with a plan they are inclined to ask the customer, "Well, what do you want to pay for this job?" May I suggest, gentlemen, that is one of the most fatal questions you can ask a customer—because, after all, the customer is a human being—the most fatal question you can ask a customer is what does he want to pay for it. You know the answer before you ask him. The answer is, "Well, I don't want to pay any more than I have to. How cheaply can I get it done?"

From the Psychological Point of View

I would suggest to you, gentlemen, from the psychological point of view, that you are starting wrongly both for the customer and yourself. It seems to me the fundamental question to ask a customer is, "What do you want to do with this job? What do you want to accomplish with this job?" and as soon as you talk about what you want to accomplish or what the customer wants to accomplish, then you detract his attention from the price question, and you get him to thinking in terms of results. "What results do you want to get from this piece of printing?" and if you can get a customer to thinking in terms of results, you can get him to thinking in terms of the return on his investment. The vast amount of printing done is no more than an investment, just as a man makes an investment in a piece of machinery. He buys the machinery because he expects to get a return from the machinery. So all over the country everywhere there is printing bought by men who expect to get a return on the use of that printing. It is my judgment, if the printers would discuss with their customers more what they expect to accomplish in an investment, and discuss with them how to make that investment in printing so as to bring the greatest returns, this question of price would recede quite materially, and the customer would wake up very frequently to the fact that his printer was not merely endeavoring to put ink on paper in printing as profitable as possible.

Cost Section

He would feel that he was talking to more than a printer, but that he was talking to a friendly business man.

It seems to me marketing methods must surround properly such an idea; that marketing ought to be based upon an understanding of the proper service to be rendered. When that is understood, it is my experience, and certainly it is my belief, that the marketing methods improve, that you begin to do a good deal more thinking about your problems, that you see your service in higher terms and that your customer begins to see your service in higher terms. It is my judgment that in a large part of your work the quality would increase, because the customer is willing to pay for the quality, because he understands in more cases than he now understands the necessity of quality. So that I think the important question for a printer to ask is "What do you want to do with this job?"

Those, very briefly, gentlemen, are the five main elements of industrial engineering, as I see it: the knowledge of your costs, your statistics; the creation of standards to gauge them by; incentives to your men, to your employee so that they desire and will profit by doing better work for you, by saving waste; a planning and a preparation of your work so thoroughly that everything moves smoothly and economically for you, and a consideration for your personnel, which I can promise to you, gentlemen, may not bring gratitude, and don't expect it, but will bring to you very great personal saisfaction in consideration of the fact that you are trying to do something for people beyond mere wages, when you expect that they themselves are going to deliver to you beyond the mere wage value; and finally the marketing questions and the development of the psychology of the service that you are trying to render to the world, so that you can make the world feel that in dealing with you you are not merely attempting to get the money, but you are also attempting to render them the very highest service.

It seems to me the master printer, or the master of any business, who tackles a job on that basis is building a business which is going to be very profitable and which is going to last.

I. P. Co. Provides for Expansion at Ft. Edwards

[FROM OUR REGULAR CORRESPONDENT]

FORT EDWARD, N. Y., July 6, 1925.—As a provision for the future expansion of its local mill the International Paper Company recently petitioned the village authorities for the closing of Underwood street and a portion of River street, both being in the vicinity of the company's plant. Following a hearing in the matter at which L. G. Willson, general manager of the Fort Edward and South Glens Falls Mills appeared in behalf of the International Paper Company the village board granted the I. P. petition. In return the I. P. Company has agreed to file with the village board a quit claim deed by the company as grantor, to the village, of rights of way on Mechanics street and Broadway where bridges now carry these streets over the company's feeder canal. The agreement also provides that if Underwood and River streets are used for the erection of buildings and other structures that the I. P. Co. will remove at its own expense and reconnect with the village sewer and water system all sewer and water pipes and mains now in these streets.

To Make Paper Rain Coats

[FROM OUR REGULAR CORRESPONDENT]

MARINETTE, Wis., July 5, 1925.—A new industry, which promises to develop into a big manufacturing institution, was opened here last week by the Reliance Paper Company, which is making paper rain coats and aprons, kiddie kapes and larger ones, retailing from ten cents to fifty-nine cents. The material is a patented one absolutely water proof. Orders for thousands of dozens from chain stores in the country are being received, compelling the company to plan more extensive quarters.

Obituary

William S. Hawes

[FROM OUR REGULAR CORRESPONDENT]

TROY, N. Y., July 6, 1925.—William S. Hawes, formerly of the Troy Paper Company and for many years past western sales representative of the Roaring Springs Blank Book Company, of Roaring Springs, Pa., with headquarters in Chicago, died recently at his home at Oak Park, Ill., after a long illness, according to word received in this city during the last week. Mr. Hawes, who is widely known among paper dealers, was born in Poultney, Vt., in 1868 and when a young man came to Troy and became associated with the Troy Paper Company.

He remained with this firm for twenty years, part of the time in an executive capacity. Since leaving the Troy Paper Company he has been identified with the Roaring Springs Blank Book Company. Mr. Hawes is survived by his wife and one son. Funeral services were conducted from his home in Oak Park and bureal was made at Poultney, Vt.

Arthur Spencer Phillips

Aurthur Spencer Phillips, an assistant treasurer of the International Paper Company died Thursday of last week, July 2. Mr. Phillips was born on August 10, 1884. His first employment in the International Paper Company was in October, 1902, in the Accounting Department, being transferred to the Treasury Department in June, 1913, and was made an assistant treasurer of the company on March 31, 1915.

News of the Boston Trade

[FROM OUR REGULAR CORRESPONDENT]

BOSTON, Mass., July 5, 1925.—A refreshing change of the tide was noticed in local paper trade circles here last week, despite the holiday and weather that was none too conducive to good trade. A general tone of optimism was noticed. Just where it originated or what caused it was difficult to learn but it seemed to permeate the trade to some extent. It was not a boom—but it was a bright spot in what has been a dull period for some time.

However, a survey of the trade this week discloses that June figures in the final analysis surprised many of the merchants. There were many to be found who admitted that "June wasn't half as bad as we had figured it was going to be." In fact June turned out, despite forecasts to the contrary, to be a good month, comparing very favorably with June of last year.

Taking into consideration the generally accepted idea that "business must slow down during these months" there really has been no "general slowing down" this past week. Trade, of course, is spotty, has been for some time, and will continue to be, various merchants say, but buying is still going on, even though in small quantities.

Contrary to recent reports that gained some circulation, paper box manufacturers here reported good business this week. These manufacturers join with other trade leaders in admitting that June was a much better month than had been anticipated. This tone is noticeable despite the general shut down of candy factories in this section. The Kraft market remains steady and prices are firm. Wax papers and summer specialties are still in heavy demand, customary with warm weather and rushing beach business. Dealers in this business say that this June was away ahead of last year. Business in the fine grades shows no marked change and prices are the same. Leaders in this branch, report, however, that business is good and see no reason why it shouldn't remain so during the summer.

There is little call for rag stock. The mills have little stock on hand, preferring to go into the market when it is needed than to keep a generous amount in the storeroom. Roofing papers still are in a demand. Prices remain firm in this branch.

Imports of Paper and Paper Stock

NEW YORK, BOSTON, PHILADELPHIA AND OTHER PORTS

NEW YORK IMPORTS

WEEK ENDING JULY 4, 1925

SUMMARY

News print .....382 rolls
Wrapping paper.....46 rolls, 34 cs.
Printing paper .....75 cs., 8 bls.
Wall paper .....26 bls., 16 cs.
Cigarette paper .....2,716 cs.
Packing paper .....1,199 bls., 12 cs.
Surface coated paper .....63 cs.
Writing paper .....19 cs.
Drawing paper .....2 cs.
Filter paper .....107 cs.
Fancy paper .....2 cs.
Decalcomania paper .....21 cs.
Paper hangings .....43 bls., 4 cs.
Photo paper .....2 cs.
Gold-coated paper .....4 cs.
Purple paper .....2 cs.
Transfer paper .....2 cs.
Envelopes .....4 cs.
Copy paper .....16 bls.
Tracing paper .....3 cs.
Lining paper .....15 bls.
Stencil paper .....1 cs.
Tissue paper .....38 cs.
Paper tubes .....17 cs.
Flintstone paper .....80 bls.
Miscellaneous.....110 cs., 2 bls., 174 rolls

CIGARETTE PAPER

Standard Products Corp., La Savoie, Havre, 20 cs.
The Surbrug Co., by same, 16 cs.
R. J. Reynolds Tobacco Co., Sarcoxie, St. Nazaire, 1,820 cs.
De Manduit Paper Corp., by same, 718 cs.
P. J. Schweitzer, Pres. Van Buren, Marseilles, 112 cs.
Standard Products Corp., Berengaria, Havre, 30 cs.

WALL PAPER

F. J. Emmerich Co., Minnetonka, London, 2 bls.
F. J. Emmerich Co., Baltic, Liverpool, 8 bls.
F. J. Emmerich Co., Leviathan, Southampton, 1 cs.
F. J. Emmerich Co., Cleveland, Hamburg, 8 bls.
Bendix Paper Co., by same, 8 cs.
Globe Shipping Co., by same, 4 bls.
Thomas & Pierson, Majestic, Southampton, 1 cs.
A. C. Dodman, Jr., Inc., Lapland, Antwerp, 4 cs.
A. C. Dodman, Jr., Inc., by same, 2 bls.
Baldwin Universal Co., Inc., Berengaria, London, 2 bls.
Baldwin Universal Co., Inc., by same, 1 cs.
W. H. S. Lloyd & Co., Berengaria, Havre, 1 cs.

PAPERHANGINGS

W. H. S. Lloyd & Co., Minnetonka, London, 35 bls.
W. H. S. Lloyd & Co., by same, 4 cs.
W. H. S. Lloyd & Co., Caronia, Liverpool, 3 bls.
A. C. Dodman, Jr., Inc., Franconia, Liverpool, 5 bls.

NEWS PRINT

Irving Bank Columbia Trust Co., Cleveland, Hamburg, 382 rolls.

PRINTING PAPER

Oxford University Press, Franconia, Liverpool, 8 cs.
B. F. Drakenfeld & Co., by same, 21 cs.
Martin & Bechtold, Columbus, Bremen, 6 cs.
J. P. Heffernan Paper Co., Rotterdam, Rotterdam, 8 bls.
Titan Shipping Co., Berengaria, Havre, 40 cs.

WRAPPING PAPER

Chemical National Bank, Cleveland, Hamburg, 46 rolls.
International Accep. Bank, by same, 34 cs.

PACKING PAPER

J. P. Heffernan Paper Co., Ohio, Hamburg, 1,199 bls.
F. C. Strype, Rotterdam, Rotterdam, 12 cs.

PURPLE PAPER

Brabant Needle Co., Franconia, Liverpool, 2 cs.

DECALCOMANIA PAPER

L. A. Consmiller, Cleveland, Hamburg, 9 cs.
L. A. Consmiller, Columbus, Bremen, 8 cs.
L. A. Consmiller, Geo. Washington, Bremen, 4 cs.

TRANSFER PAPER

Manhattan Decalcomania Co., Columbus, Bremen, 2 cs.

WRITING PAPER

Guibout freres, Leviathan, Havre, 5 cs.
Guibout freres, Majestic, Havre, 1 cs.
P. Puttman, De Grasse, Havre, 4 cs.
The Eleto Co., Berengaria, Havre, 8 cs.
Bernard Judae & Co., by same, 1 cs.

ENVELOPES

Japan Paper Co., American Merchant, London, 4 cs.

FILTER PAPER

E. Fougera & Co., Majestic, Bordeaux, 107 cs.

COPY PAPER

Roneo Co., Virgilia, London, 16 bls.

TRACING PAPER

E. Dietzgen & Co., Keifuku Maru, Hamburg, 3 cs.

SURFACE COATED PAPER

Gevaert Co., of America, Lapland, Antwerp, 12 cs.
Globe Shipping Co., Columbus, Bremen, 50 cs.
F. G. Prager Co., by same, 1 cs.

GOLD COATED PAPER

C. B. Richard & Co., Columbus, Bremen, 4 cs.

FANCY PAPER

Whiting & Patterson Co., Inc., Berengaria, London, 2 cs.

DRAWING PAPER

H. Reeve Angel & Co., Inc., Minnetonka, London, 2 cs.

LINING PAPER

Whiting & Patterson Co., Inc., Ohio, Hamburg, 15 bls.

STENCIL PAPER

Roneo Co., Virgilia, London, 1 cs.

PHOTO PAPER

J. J. Gavin, Baltic, Liverpool, 2 cs.

TISSUE PAPER

F. C. Strype, Franconia, Liverpool, 28 cs.
Standard Products Corp., Majestic, Havre, 10 cs.

PAPER TUBES

H. de Maguinn Co., De Grasse, Havre, 17 cs.

FLINSTONE PAPER

Impex Trading Co., Columbus, Bremen, 80 bls.

MISCELLANEOUS PAPER

Perry, Ryer & Co., Assyria, Glasgow, 8 cs.
T. F. Wilmot & Co., Majestic, London, 21 cs.
Drinhausen Hollkott Paper Co., Kei. Maru, Hamburg, 174 rolls.
Japen Paper Co., De Grasse, Havre, 19 cs.
Gallagher & Ascher, by same, 4 cs.
Standard Products Corp., by same, 40 cs.
Du Pont Cellophane Co., by same, 7 cs.
Coenca Morrisson Co., by same, 10 cs.
Maurice O'Meara Co., Rotterdam, Rotterdam, 2 bls.
Prager Co., Inc., by same, 1 cs.

RAGS, BAGGINGS, ETC.

Amsinck Sonne & Co., Inc., Baltic, Liverpool, 18 bls. rags.
Goschens, Cunliffe & Co., by same, 32 bls. bagging.
L. H. Abenheimer, Franconia, Liverpool, 70 bls. paperstock.
Ayres W. C. Jones, by same, 33 bls. cottonwaste.
W. Barnet & Sons, by same, 29 bls. rags.
International Accep. Bank, Valsavoia, Genoa, 39 bls. rags.
Brown Bros. & Co., Cleveland, Hamburg, 464 bls. rags.
W. Schall & Co., by same, 5 bls. rags.
A. H. Searle & Co., by same, 3 bls. rags.
A. W. Fenton, Inc., by same, 36 bls. rags.
E. J. Keller Co., Inc., by same, 1,104 bls. rags.
E. J. Keller Co., Inc., Sarcoxie, St. Nazaire, 215 bls. rags.
Goldman, Sachs & Co., by same, 74 bls. rags.
Salomon Bros. & Co., by same, 43 bls. rags.
A. W. Fenton, Inc., by same, 90 bls. rags.
A. W. Fenton, Inc., Assyria, Glasgow, 70 bls. rags.
Anglo South American Trust Co., by same, 66 bls. rags.
Brown Bros. & Co., by same, 40 bls. rags.
M. Snedeker Corp., West Hartlepool, Belfast, 96 bls. paperstock.
A. W. Fenton, Inc., by same, 70 bls. paperstock.
National City Bank, West Hartlepool, Leith, 66 bls. rags.
A. W. Fenton, Inc., Keifuku Maru, Hamburg, 373 bls. rags.
Katzenstein & Keene, Inc., by same, 281 bls. rags.
Guaranty Trust Co., Columbus, Bremen, 15 bls. rags.
Brown Bros. & Co., Geo. Washington, Bremen, 165 bls. rags.
National City Bank, by same, 64 bls. rags.
E. J. Keller Co., Inc., M. S. Dollar, Shanghai, 83 bls. rags.
E. J. Keller Co., Inc., Rotterdam, Rotterdam, 92 bls. rags.
E. J. Keller Co., Inc., United States, Copenhagen, 68 bls. bagging.
P. Berlowitz, Waukegan, Havre, 157 bls. rags.
Atterbury Bros., Inc., by same, 37 bls. rags.
International Purchasing Co., by same, 53 bls. rags.
E. Gross & Co., by same, 58 bls. rags.
E. J. Keller Co., Inc., by same, 582 bls. rags.
L. H. Abenheimer, by same, 60 bls. rags.
L. H. Abenheimer, Waukegan, Dunkirk, 78 bls. rags.
Castle & Overton, Inc., by same, 93 bls. rags.
A. W. Fenton, Inc., Columbia, Glasgow, 68 bls. paperstock.
Mechanics & Metals National Bank, by same, 41 bls. bagging.
National City Bank, by same, 114 bls. paperstock.
Brown Bros. & Co., by same, 99 bls. paperstock.
Brown Bros. & Co., Virgilia, London, 30 bls. rags.
State Bank, by same, 44 bls. newcuttings.
Brown Bros. & Co., Idaho, Antwerp, 282 bls. rags.
Brown Bros. & Co., Idaho, Newcastle, 98 bls. rags.
The Stone Bros. Co., Inc., Idaho, Hull, 165 bls. paperstock.
W. Barnet & Sons, Caronia, Liverpool, 7 bls. rags.
R. M. Gray, Inc., by same, 48 bls. paperstock.
Ayres W. C. Jones, by same, 47 bls. cottonwaste.
E. J. Keller Co., Inc., Lapland, Antwerp, 86 bls. flaxwaste.
E. J. Keller Co., Inc., Zeeland, Antwerp, 89 bls. flaxwaste.
E. J. Keller Co., Inc., Cubano, Buenos Aires, 35 bls. rags.
E. J. Keller Co., Inc., Cabo Hatteras, Marseilles, 140 bls. rags.
E. J. Keller Co., Inc., Eastern Dawn, Antwerp, 437 bls. rags.
E. J. Keller Co., Inc., by same, 101 bls. bagging.
Katzenstein & Keene, Inc., Pr. Roosevelt, Bremen, 13 bls. newcuttings.

OLD ROPE

Brown Bros. & So., Cleveland, Hamburg, 71 coils.
Yglesias & Co., Monterey, Havana, 5 bls.
International Purchasing Co., Rotterdam, Rotterdam, 5 coils.
Brown Bros. & Co., by same, 199 coils.
Brown Bros. & Co., Idaho, Newcastle, 184 coils.
Brown Bros. & Co., Idaho, Hull, 444 coils.
Brown Bros. & Co., by same, 8 bls.

(*Continued on page 60*)

Imports of Paper and Paper Stock

(*Continued from page 59*)

R. M. Gray, Inc., Caronia, Liverpool, 16 coils.
E. J. Keller Co., Inc., United States, Copenhagen, 573 bls.

MANILA ROPE

Republic Bag & Paper Co., Pr. Van Buren, Manila, 200 coils.
Ellermans' Wilson Line, Minnetonka, London, 58 coils.

WOOD PULP

Castle & Overton, Inc., Cleveland, Hamburg, 545 bls. woodpulp, 109 tons.
Castle & Overton, Inc., Keifuku Maru, Hamburg, 560 bls. woodpulp, 112 tons.
Ira L. Beebe & Co., Inc., by same, 905 bls. woodpulp, 181 tons.
Tidewater Paper Mills Co., Bornholm, Liverpool, N. S., 12,640 bls. woodpulp.
Johaneson, Wales & Sparre, Inc., Natirar, Kramfors, 5,010 bls. sulphite pulp, 835 tons.
Bulkley, Dunton & Co., by same, 1,200 bls. sulphite pulp, 200 tons.
E. M. Sargeant Co., by same, 1,200 bls. sulphite pulp, 200 tons.
E. M. Sargeant Co., United States, Oslo, 325 bls. chemical pulp.
E. M. Sergeant Co., United States, Copenhagen, 256 bls. woodpulp.
Scandinavian Pulp Agency, Inc., Columbus, Bremen, 1,250 bls. sulphite pulp.
Bulkley, Dunton & Co., Casper, 500 bls. woodpulp.

BALTIMORE IMPORTS

WEEK ENDING JULY 4, 1925

Tidewater Papermills Sales Corp., Cranley, Botwood, 4,196 rolls paper.
Johaneson, Wales & Sparre, Inc., Natirar, Hernosand, 390 bls. sulphite pulp, 65 tons.
Scandinavian Pulp Agency, Inc., by same, 2,100 bls. sulphite pulp, 350 tons.
Hartig Pulp Co., by same, 1,800 bls. sulphite pulp, 300 tons.
Lagerloef Trading Co., Natirar, Kotka, 428 rolls woodpulp boards, 60 tons.
Bulkley, Dunton & Co., Casper, 100 bls. woodpulp.

PHILADELPHIA IMPORTS

WEEK ENDING JULY 4, 1925

Strawbridge & Clothier Co., Waukegan, Havre, 1 cs. writing paper.
J. J. Buchey & Co., Idarwald, Hamburg, 11 pgs. crepe paper.
Philadelphia National Bank, by same, 77 bls. wrapping paper.
Philadelphia National Bank, by same, 153 rolls wrapping paper.
Peter Service Co., by same, 3 pgs. paper.
A. J. Holman & Co., Beemsterdyk, Rotterdam, 41 cs. printing paper.
Bank of New York, by same, 91 bls. paperstock.
The Stone Bros. Co., Inc., by same, 80 bls. paperstock.
Brown Bros. & Co., by same, 170 bls. rags.
Equitable Trust Co., by same, 62 bls. rags.
National Bank of Commerce, by same, 77 bls. rags.
Chemical National Bank, by same, 32 bls. rags.
Union National Bank, by same, 38 bls. rags.
Philadelphia National Bank, by same, 140 bls. rags.
E. J. Keller Co., Inc., by same, 185 bls. rags.
E. J. Keller Co., Inc., Beemsterdyk, Amsterdam, 570 bls. rags.
E. J. Keller Co., Inc., J. Luckenbach, Kobe, 300 bls. rags.
E. J. Keller Co., Inc., Hannover, Bremen, 312 bls. rags.
Equitable Trust Co., Alaska, Havre, 36 bls. rags.
Mechanics & Metals National Bank, by same, 96 bls. rags.
Anglo South American Trust Co., London Commerce, London, 372 bls. rags.
Brown Bros. & Co., by same, 108 bls. rags.
Castle & Overton, Inc., Idarwald, Hamburg, 481 bls. rags.
Salomon Bros. & Co., by same, 42 bls. rags.
Philadelphia National Bank, by same, 195 bls. rags.
National City Bank, by same, 144 bls. rags.
W. Schall & Co., by same, 176 bls. rags.
New York Trust Co., by same, 51 bls. rags.
E. J. Keller Co., Inc., by same, 1,208 bls. rags.
New York Trust Co., Hektor, Barcelona, 92 bls. dark cottons.
New York Trust Co., by same, 133 bls. rags.
Mechanics & Metals National Bank, by same, 72 bls. rags.
Union National Bank, by same, 77 bls. dark cottons.
Guaranty Trust Co., by same, 50 bls. rags.
E. J. Keller Co., Inc., by same, 604 bls. rags.
Castle & Overton, Inc., by same, 124 bls. rags.
The Stone Bros. Co., Inc., by same, 84 bls. rags.
Baltimore Trust Co., Idarwald, Marseilles, 177 bls. rags.
Guaranty Trust Co., by same, 100 bls. rags.
Amsinck Sonne & Co., Inc., by same, 106 bls. rags.
The Stone Bros. Co., Inc., by same, 291 bls. rags.
E. J. Keller Co., Inc., Sarcoxie, St. Nazaire, 438 bls. rags.
A. W. Fenton, Inc., West Hartlepool, Leith, 43 bls. bagging.
Penn Rag & Metal Co., Waukegan, Havre, 128 bls. bagging.
Penn Rag & Metal Co., by same, 746 bls. rags.
Katzenstein & Keene, Inc., by same, 52 bls. rags.
Guaranty Trust Co., by same, 314 bls. rags.
I. M. Hagy Waste Works, by same, 106 bls. rags.
E. J. Keller Co., Inc., by same, 287 bls. rags.
Allen Lewiss Co., Waukegan, Havre, 207 bls. rags.
The Stone Bros. Co., Inc., by same, 158 bls. rags.
E. J. Keller Co., Inc., Waukegan, Dunkirk, 60 bls. rags.
Walworth Sons, by same, 76 bls. rags.
Standard Waste Manfg. Co., by same, 21 bls. rags.
The Stone Bros. Co., Inc., by same, 156 bls. rags.
Castle & Overton, Inc., by same, 252 bls. rags.
Leipheimer & Nissmer, by same, 54 bls. cottonwaste.
Union National Bank, Eastern Dawn, Rotterdam, 76 bls. rags.
Philadelphia National Bank, by same, 136 bls. rags.
Brown Bros. & Co., by same, 44 bls. cottonwaste.
Stoll & Walsh, by same, 25 bls. cottonwaste.
Bank of New York, by same, 59 bls. rags.
The Stone Bros. Co., Inc., Eastern Dawn, Antwerp, 123 bls. rags.
Brown Bros. & Co., by same, 381 bls. rags.
Katzenstein & Keene, Inc., Eastern Dawn, Germany, 441 bls. rags.
Katzenstein & Keene, Inc., Fluor Spar, England, 363 bls. rags.
Castle & Overton, Inc., Idarwald, Hamburg, 1,375 bls. woodpulp.
Bulkley, Dunton & Co., Casper, 100 bls. woodpulp.

BOSTON IMPORTS

WEEK ENDING JULY 4, 1925

G. F. Malcolm, Samaria, Liverpool, 12 cs. tissue paper.
F. A. Chase & Co., Westerner, Antwerp, 140 rolls paper.
Hughes Fawcett, by same, 79 bls. flaxwaste.
Spoulding Fiber Co., by same, 98 bls. flaxwaste.
Salomon Bros. & Co., by same, 66 bls. flaxwaste.
Maurice O'Meara Co., by same, 107 bls. bagging.
Francois Lembree, by same, 9 bls. rags.
E. Butterworth, Inc., by same, 39 bls. rags.
Forte Moran Co., by same, 45 bls. rags.
Burmon & Bolonsky, by same, 9 bls. rags.
Reis & Co., Westerner, Rotterdam, 61 bls. cottonwaste.
Train, Smith & Co., Sagoporack, Hull, 451 bls. paperstock.
Sherwin, Sheppard & Co., Samaria, Liverpool, 5 bls. rags.
J. T. Slack Corp., by same, 3 bls. rags.
Katzenstein & Keene, Inc., Median, Manchester, 132 bls. newcuttings.
Baring Bros. & Co., Ltd., by same, 373 bls. rags.
Baring Bros. & Co., Ltd., by same, 77 bls. bagging.
Baring Bros. & Co., Ltd., by same, 155 bls. hidecutting.
Draper & Co., Median, Liverpool, 1 bl. rags.
First National Bank of Boston, by same, 88 bls. rags.
J. T. Lodge Co., by same, 11 bls. rags.
Baring Bros. & Co., Ltd., by same, 24 bls. rags.
J. B. Moors & Co., by same, 677 bags hidecuttings.
National Shawmut Bank, by same, 10 bls. rags.
Bulkley, Dunton & Co., Irma, Kimme, 2,850 bls. woodpulp.

F. W. Pomeroy Visits in Holyoke

HOLYOKE, Mass., July 7, 1925.—F. W. Pomeroy, superintendent of the Southern Cotton and Paper Company of Chattanooga, Tenn., was a visitor to Holyoke this past week the first time that he has visited it since he left Holyoke in 1897—28 years ago. He was born in Easthampton and came to Holyoke in 1866 to work in the old Albion Paper Company. Later he worked in the Winona and still later with the Parsons Paper Company at their No. 2 mill. He left Holyoke to work for the Millers Falls Paper Company and then went to the Crane mills at Dalton for seven years, thence to the Gilbert Paper Company at Waterford, N. Y., and thence to Chattanooga.

New Booklet on Coal Handling

"Finer and Better Coal Handling Equipment" is the title of a new booklet just issued by the Conveyors Corporation of America, 326 West Madison street, Chicago.

This booklet describes the American Mono-Rail Cable Conveyor, newly designed equipment for handling coal from railroad cars to silos, bins, bunkers or ground storage. Views of a number of new installations are featured and many detail half-tones of the equipment are included.

Copies of the new booklet will be sent free upon request to the Conveyors Corporation of America, 326 West Madison street, Chicago.

International Buys Bastrop Co.

The International Paper Company has closed a contract for the purchase of the Bastrop Pulp and Paper Company of Louisiana. It is understood that possession of the property will be taken over during the month. The Bastrop mill is reputed to be one of the lowest cost producers of kraft paper on the continent.

The manufacture of kraft paper from southern pines is a development of only comparatively recent years. This wood can be delivered to the mill so cheaply that its costs are much less than those of the northern mills even after allowing for freight differentials.

The Bastrop mill has a present daily capacity of 70 tons of pulp and 50 tons of paper, but it is understood that the International Paper Company plans a substantial further expansion in this territory with a view to availing itself to a greater extent of the low cost of production which it affords.

Paper Speed Regulator

A new speed regulator for single-motor paper machine drive, designed and marketed by the General Electric Company, is now in successful operation in a number of eastern mills. This regulator was designed with the object of eliminating variations in the speed of the back line shaft which might occur as a result of any of a number of conditions such as variations in speed of the prime mover, belt slippage, etc.

The regulator consists primarily of a small pilot generator driven directly from the back line shaft of the paper machine in such a way that its speed is always directly proportional to the speed of the back line shaft. This pilot generator is so designed that any variation in its speed will cause a wide variation in the voltage across its terminals and this variation of terminal voltage operates to change the field strength of the main driving motor, thus insuring constant speed of the back line shaft driven by that motor.

Paper Converting May Locate at Salem, Ore.

SALEM, Ore., July 5, 1925.—A new paper manufacturing company is proposed for this place, probably to be called the Western Paper Converting Company. Tentative plans so far divulged imply that the capitalization will be $200,000 with an employment capacity of 150 to 200 persons. While there is yet some discussion as to whether the new plant will be located at Salem or at Vancouver, the advantages seem to lie with Salem, since the Oregon Pulp and Paper Company has offered the new firm a site on Front street in that city.

Those closely concerned in the promotion of the new project are E. J. Moseley of Los Angeles, A. D. Alpine of Seattle and E. A. O'Neill for some time with the Oregon Pulp and Paper Company.

Box Board Statistics for May

WASHINGTON, D. C., June 29, 1925.—The Department of Commerce announces May figures on the operations of box board manufacturers, based on reports of 89 firms operating 111 plants. The capacity data in the following table vary according to the normal number of working days in each month, Sundays and holidays being excluded until the end of May, 1924, and Saturdays also being excluded since June 1, 1924, when the five-day week was adopted by about 80 per cent of the mills. A supplemental table shows the production of box board for each month of 1922, 1923 and 1924, by the same firms.

Year and Month	Operation: Inch hours Capacity	Operation: Inch hours Operated	Operation: Percent of capacity	Production: Tons Capacity	Production: Tons Output	Production: Percent of capacity	Tons: Orders received	Tons: Unfilled orders (end of month)
1924—								
January	9,855,612	8,542,957	86.7	229,814	181,953	79.2	198,156	111,825
February	9,476,550	8,290,289	87.5	220,975	179,854	81.4	167,855	103,643
March	9,855,612	9,194,400	93.3	229,814	200,411	87.2	195,635	97,181
April	9,855,612	8,574,444	87.0	229,814	182,817	79.5	158,980	73,629
May	9,855,612	8,253,431	83.7	229,814	173,483	75.5	165,868	68,676
Total, 5 months	48,898,998	42,855,521	87.6	1,140,231	918,518	80.6	886,494	.....
1925—								
January	7,960,302	8,388,897	105.4	185,619	199,633	107.5	199,649	112,911
February	7,600,440	7,550,968	99.3	177,320	177,292	100.5	162,878	100,250
March	8,360,484	7,569,995	90.5	197,186	*179,067	91.0	*170,063	*89,909
April	8,360,484	7,596,658	90.9	197,186	*184,976	93.8	*165,617	*75,668
May	7,980,462	7,111,776	89.1	188,223	163,956	87.1	174,411	79,787
Total, 5 months	40,262,172	38,218,294	94.9	945,534	904,924	95.7	872,618	.....

Year and Month	Tons: Shipments of boxboard	Tons: Stocks of boxboard end of month	Consumption of Waste Paper: Tons Capacity	Consumption of Waste Paper: Tons Consumed	Consumption of Waste Paper: Percent of capacity	Stocks of Waste Paper, Tons (end of month): On hand	In transit	Unshipped purchases
1924—								
January	179,947	46,696	217,828	170,291	78.2	132,010	14,324	40,891
February	176,037	50,513	209,450	169,644	81.0	127,259	14,353	27,100
March	202,097	48,827	217,828	186,463	85.6	144,118	15,417	24,480
April	182,532	49,112	217,828	169,573	77.8	143,601	11,918	27,631
May	170,821	51,774	217,828	165,479	76.0	142,319	11,632	26,854
Total, 5 months	911,434	.....	1,070,762	861,450	80.5	.....	.....	.....
1925—								
January	195,501	52,466	175,938	193,285	109.9	172,382	18,846	34,974
February	174,435	54,665	167,910	170,023	101.3	172,456	16,635	27,110
March	180,736	51,835	184,778	169,383	91.7	176,035	13,199	22,948
April	*179,484	*57,212	184,778	*169,287	91.6	*172,223	14,307	32,590
May	168,171	52,765	176,379	159,250	90.3	174,726	12,686	26,129
Total, 5 months	898,327	.....	889,783	861,228	96.8	.....	.....	.....

*Revised.

Production of Boxboard (in Tons) by 89 identical firms.

	1922	1923	1924		1922	1923	1924
January	109,147	171,934	181,953	July	138,429	147,244	164,762
February	116,577	156,328	179,854	August	172,300	189,684	183,570
March	146,201	178,756	200,411	September	167,894	162,663	188,669
April	133,561	167,923	182,817	October	162,025	183,477	196,633
May	152,579	189,106	173,483	November	162,616	161,536	170,550
June	155,106	173,601	151,414	December	156,510	150,339	170,674

New York Market Review

OFFICE OF THE PAPER TRADE JOURNAL,
Wednesday, July 8, 1925.

The first week of July is decidedly an off week. The Fourth of July coming on Saturday split the week and genuine July quiet covered the two weeks. There is nothing which is showing real animation at this time and the buying has tightened down until business now consists purely of contract business and such orders as consumers find absolutely imperative. There is the summer lull in the printing field and consequently the orders which are coming through from this source are few and do not bulk up any too well. Production is being curtailed to keep somewhere near within pace of the demand for the manufacturers are opposed to accumulating any great surplus of stock with two months of slow business facing them and a certain amount of uncertainty existing as to just how good business will develop in the Autumn. Those who are closest to the market are the most optimistic as to the Fall possibilities and probabilities but even at that it is an uncertainty and manufacturers consider it a necessary precaution to keep stock from mounting up too high. There is such a dearth of orders today that those who have any really desirable business to place need not search far for inviting consideration. This does not mean that the market has fallen a prey to cut-throat concessions and that everybody who has a small order to place can get what he wants almost at his own price. It does mean, however, that the consumer who is in the market for any considerable business can obtain advantage of slightly cut prices if he searches for it very hard. This will be the condition no doubt until cooler weather comes, vacations are over and the interrupted routine of business in general is restored. Prices are holding up well and it is very evident that, although business may be slow, it is not destined to be a Summer of tumbling prices.

News print is starting on its hot weather slump. Here in the metropolitan area the newspapers are skrinking in size and some of the issues are very scimpy. For the next eight weeks the consumption will be considerably less than it has been running for the summer period is bound to effect newspapers both in circulation and advertising. This, however, is no reflection on news print and the demand will remain constant and fairly satisfactory right through the slow spell.

Fine papers are falling off in demand and coarse papers are experiencing a genuine slump. Box board is running slow and tissues are getting into the rut they occupied a year ago this time and which they remained in until the Fall gave them a new lease of life.

Mechanical Pulp

There is a fair amount of business in the mechanical pulp market and the prices are holding steady. Most of the business, it is true, is on a contract basis but the producers evidently feel secure in their position and are holding to their prices. Stock is accumulating at the mills but this is in preparation for the summer dry spells whch will cripple production conditions.

Chemical Pulp

The chemical pulp business is showing more activity after a few weeks during which paper and board manufacturers were backward in their orders. Business is particularly good now and interest is especially good in the better qualities of foreign pulp. Buying for future delivery is very satisfactory although spot buying is lagging somewhat. The foreign markets are reported in a firm condition and mills are well sold up for the balance of the year.

Old Rope and Bagging

While the old rope market cannot be called brisk it is favored with a fairly consistent stream of small orders and prices are holding strong. Practically the same is true of conditions in the bagging market.

Rags

This is the inventory period for most of the mills and the rag market is one of the first to reflect the cessation of activity from these sources of business. The paper mills are doing very little buying of rags at this time and some of them are absolutely out of the market for supplies for some time to come. There have been few changes in prices although the tendency is toward a lower level, with the low grades most susceptible to reduction.

Waste Paper

Paper stock is doing a trifle better than it has been doing, some of the lower grades showing the most activity at this writing. On the whole the market is quiet, however, and this condition will probably not be relieved to any extent for some time to come. Prices are not materially changed.

Twine

The twine business is almost as flat as it was in July of 1924. Very little business is coming through and those orders which are being placed are for immediate needs. The twine men are prepared for dull times from now until September 1.

The "Idaho Forester"

The annual edition of the Idaho Forester, published by the Associated Foresters of the University of Idaho at Moscow, has just appeared. This is an attractive booklet of seventy-two pages and is replete with timely articles and notes dealing in the main with the forestry situation in Idaho and the activities of the School of Forestry for the year just closed. The edition is dedicated to Honorable I. H. Nash, state land commissioner for Idaho, a staunch friend of forest conservation, who contributes an able article on "Why a State Conservation Policy in Idaho."

Other leading articles include "Possibilities of Pulp and Paper Industry in North Idaho" by Elers Goch; "Fire Resistance of Northern Rocky Mountain Conifers" by Howard R. Flint; "Professional Ethics as Applied to Foresters" by H. H. Chapman; "An Experiment in Forestry" by Tom Jackson; "Products from Immature White Pine Stands in Idaho" by J. H. Larsen; "Some Methods Used in Grazing Studies" by C. L. Forsling; and "Young Stands of Western White Pine—Progress Report" by C. W. Watson.

The edition is printed on snow white enameled book paper, is appropriately illustrated and bound in a cover of artistic design.

Arthur M. Sowder is editor; Arlie W. Toole business manager, and C. W. Watson faculty adviser.

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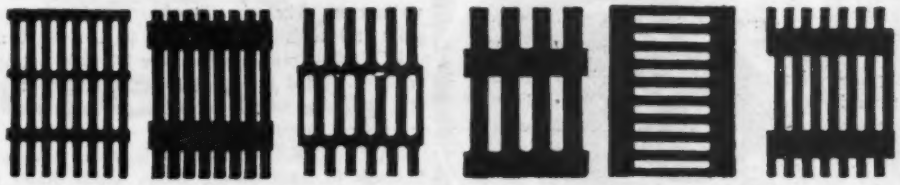

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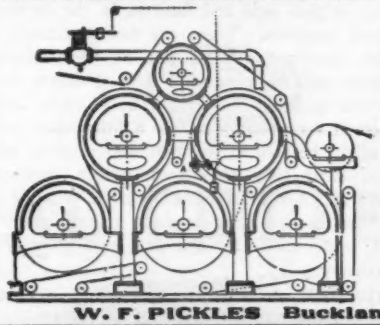

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Miscellaneous Markets

OFFICE OF THE PAPER TRADE JOURNAL,
Wednesday, July 8, 1925.

It is now the period of the year when experience has taught that there is not much to be looked for in the chemical market. There is nothing to indicate that this year is to be any exception and the market has swung into that indifferent mood which is bound to continue with little relief until the autumn. While the sales departments have not entirely abandoned their energetic pursuit of orders they realize that most of their efforts are bound to result in waste energy and that they might almost as well settle down for the next few weeks to accept what comes their way without straining themselves to stimulate the business which simply isn't there. The highest hopes at this writing are confined to a desire to see the summer business mount up a shade better than it did during July and August of last year. At this time the conditions seem to indicate that the total of business which will come through during that period will be considerably better for several of the commodities are in a vastly superior position to that they occupied at this time last year. While business for the first half of the year has not been anything to boast of its volume has been considerably more than that transacted during the first half of 1924. It is generally believed by the chemical men that they will get through the summer in better shape than they did last year and that the fall business will set in earlier than it did in 1924 and that it will be highly satisfactory. If this proves true the advent of September will find them considerably on "velvet" compared with their 1924 position and if the year winds up in any sort of shape the story of 1925 will not make bad reading when it is finally written. Meanwhile changes are few and far between, prices are holding to their former figure and few inquiries are being received.

BLANC FIXE.—Blanc fixe has fallen into a restful condition. There is little buying at this time and interest in the commodity is confined to frequent inquiries. There are few consumers who have any mentionable quantity of blanc fixe on hand which indicates that the summer will see a constant flow of orders coming through although it will be small business. The inquiries indicate that the consumers could very readily handle a little more surplus stock and that they might be able to see their way clear to take it if they were offered what they considered proper concessions. The market, however, is not yet in what might be called a concession-making mood and so the buying does not materialize. From $60 to $70 a ton is being asked for the pulp and from $75 to $90 a ton for the powder.

BLEACHING POWDER.—The demand for bleaching powder keeps the stock moving fairly well and yet it is evident that the summer slackening is on. Supplies are being taken out satisfactorily on a contract basis and the market is by no means glutted with stock. Bleach is quoted at 1.90 cents a pound.

CAUSTIC SODA.—The contract call for caustic soda keeps the market relieved of an excessive surplus but spot buying has fallen off until it is no longer a real factor. There is said to be some shading of prices in certain quarters but from 3.10 to 3.15 cents a pound is still being asked with general uniformity.

CASEIN.—Casein which until recently had enjoyed a brilliant run of popularity is now slowing down steadily although there is still a fair call for it. While 12½ cents a pound is still being asked, there are instances where consumers are finding a buying opportunity at 12 cents.

CHINA CLAY.—Buying of China clay is now of a limited order and in wide contrast to the buying that it has been experiencing for some weeks. Consumers will for the next two months buy only as they are forced to buy. The imported grades are quoted at from $16 to $20 a ton and the domestic grades at from $12 to $15 a ton.

CHLORINE.—Chlorine is participating in the general slowing up process. There is still quite a little business, however, and the price still holds firmly at from $4.50 to $7.00 a pound in tanks.

ROSIN.—Rosin is still on the toboggan but business was so good when it started to slip that it can fall off considerably more and still be doing fairly well. The naval stores centers are quoting it at from $6.50 to $6.70.

SALT CAKE.—Salt cake is doing reasonably well although business in some of the trades which draws generously on salt cake is not now at its peak. The demand is growing less and the buying is largely on a contract basis. It is selling at from $16 to $17 a ton.

SODA ASH.—Soda ash is not in a very energetic position just now. It is exceedingly dull with some fair contract buying but hardly a dash of spot business. It is quoted at 1.38 cents a pound on a flat basis at the works.

SULPHATE OF ALUMINA.—Although sulphate of alumina has been slowing up there is still a much better demand for it than existed at this time a year ago. The commercial grades are bringing from 1.40 to 1.45 cents a pound at the Eastern works and the iron free is quoted at from 2.10 to 2.25 cents a pound.

SULPHUR.—Sulphur remains in fair shape, the contract withdrawals being satisfactory for the time of year. The price has been cut so that now it is selling at from $17 to $18 a ton.

TALC.—There is a fair demand for talc at this time although it is showing the effect of the Summer dullness. It is quoted at from $17 to $18 a ton.

Brazil's Paper Imports

WASHINGTON, D. C., July 5, 1925.—The principal kinds of paper imported into Brazil are in the order of their importance, news print, "assetinado" lithographic paper and sulphite bond, according to a report received by the Paper Division of the Department of Commerce from the American consul at Rio de Janeiro. The report states that Brazilian paper dealers do not as a rule carry stocks of many varieties of paper but prefer to keep on hand only a few grades that may serve for as many purposes as possible. Discussing this market in some detail the American consul continues:

The imports shown under the caption of cardboard and millboard consist chiefly of boxboard and bristol board, and notwithstanding the increase registered in 1923 it is generally believed that the increasing importance of the domestic industry tends to cut down importations of foreign boards. The boxboard manufactured locally is usually a cheap grey or brown board made of old newspapers and rags.

Most of the writing paper sold locally is the "assetinado"; the next in demand being sulphite bond (white). In most cases price is the determining factor in this market, but there is a small demand for high-grade writing paper which is imported from the United States and England.

The chief item among wrapping paper imports is a high quality, light-weight, kraft paper, imported principally from Sweden. Small amounts of glassine and greaseproof paper are imported, also chiefly from Sweden.

The news print trade at present is almost entirely in the hands of German, and Scandinavian exporters, but there is a fairly good market for American paper of other grades. The price advantage enjoyed by European exporters over American firms has apparently narrowed within the past few months and several local paper importers have manifested interest in paper of American manufacture.

All varieties of paper except news print are handled on the local market by importing wholesalers. Under the existing customs regulations newspapers are permitted to import news print at rates of duty considerably under those paid by other importers.

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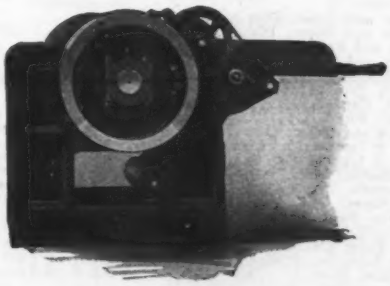

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Advance Bag and Paper, 7s 1943	98	100*
Bastrop Pulp and Paper, 7½s 1932	104	108*
Brompton Pulp and Paper, 6s 1927	93	95
Beaver Board, 8s 1933	92	94
Bedford Pulp and Paper, 6½s 1942	98	...
Berkshire Hills Paper Co., 8s 1941	...	80
Beaver Board, N. Y. Curb, 8s 1933	93	95
Beaver Products Corp., 7½s 1942	104	106
Belgo Canadian Paper, 6s 1943	100	101
Brown Paper Co., 8s 1931	102	...
Berlin Mills, 5s 1931	98	...
Bryant Paper Co., 6s 1942	98	101
Brown Company Serial, 6s 1925-43	97	100
Central Paper, 6½s 1925-42	91	94
Cape Breton Pulp and Paper, 6s 1932	100	..
Carthage Sulphite Pulp and Paper, 8s 1941	40	50
Champion Coated Paper Co., 6s 1924-34	...	102
Champion Fibre Co. Notes, 8s 1930	101	...
Cherry River Paper, 5s 1929	97	100*
Donnacoona Paper Co., Ltd., 6s 1940	99	101
Eddy Paper, 7s 1931	97	...
Eagle Paper, 6½s 1932	96	100
Escanaba Paper, 6s 1933	87	95*
Fox River Paper, 7s 1931	100	...
Fort Orange Paper Co, 7s 1942	95	99
Eddy Paper Co., 7½s 1931	95	...
Gilbert Paper Co., 7s 1927	96	...
Gilbert Paper Co., 6½s 1923-39	101	102*
Hammermill Paper Co., 6s 1930-39	99	...
Hercule Corp'n, 8s 1936	99	102
Hummell, Ross Fibre Corp., 7s 1925	90	...
Jessup & Moore Paper Co., 6s 1939	90	97
Kenmore Pulp and Paper Co., 6s 1937	89	...
Lake Superior Pulp and Paper, 6s 1941	105	...
Mattagami Pulp and Paper, 6s 1937	90	...
Marinette & Menominee, 7½s 1936	104	...
National Paper and Type, 6s 1947	96	99*
Oswego Falls Corp., 8s 1942	102	105
Orono Pulp and Paper, 5s 1941	93	96*
Orono Pulp and Paper, 6s 1943	97	100*
Oxford Paper Co., 6s 1947	101	...
Paterson Parchment Paper, 5½s 1927-28	98	100
Paterson Parchment, 6s 1938	98	100
Parker, Young Co., 6½s 1944	92	96
Price Bros. & Co., Ltd., 6s 1943	100	102
Provincial Paper Mills, Ltd., 6s 1940	97	...
Riordon Co., Series A, 8s 1940	115	118
Riordan Paper, 6s 1924	95	...
Riordan Pulp and Paper, Ltd., 6s, 1929	33	35
River Raisin Paper, 8s 1936	104	106
St. Maurice Paper Co., Ltd., 5½s, 1929	98½	99¼
St. Regis Paper, 6½s, 1929-35	97	102
Smith (Howard) Paper Mills, 7s 1941	98	100
Smith (Howard) Paper Mills, 6s 1934	98	...
St. Croix Paper, 5s 1923-37	95	...
Stevens & Thomson Paper, 6s 1942	88	92
Spanish River Pulp and Paper, 6s 1931	105	108
Spanish River Pulp and Paper, Gen 8s 1941	106	109
Ticonderoga Pulp and Paper Co., 6s, 1940	91	95
Ticonderoga Pulp & Paper 1-5, 1930	88	93
S. D. Warren Company, 6s, 1945	97	100
Whittaker Paper, 1st 7s 1942	96	...
Watab Paper Co., 6½s 1942	101	...
Waterway Paper Products, 7s 1924-27	95	100
Wayagamack Pulp and Paper, Ltd., 6s 1951	87	90

STOCKS	BID	ASKED
Abitibi Power and Paper, Com	71	72
Abitibi Power and Paper, Pfd	108	...
Advance Bag and Paper, Com	8	12*
Advance Bag and Paper, Pfd	77	...
Beaver Board, Com	4	6
Beaver Board, Pfd	35	40
Bryant Paper, Cap	12	...
Bryant Paper, Pfd	9	...
Brompton Pulp and Paper, Cap	20	23
Chicago Mill & Lumber Co., Com	63	...
Chicago Mill & Lumber Co., Pfd	98	104
Crown Williamette, Com	93	98*
Crown Williamette, 7% A, Pfd	98	SW
Donnacoona Paper, Pfd	95	100
Great Northern Paper, Cap	260	270
Jessup & Moore Paper, pfd	73	77
International Paper Co., Com	66	68
International Paper Co., Pfd. 6%	78	80
Mengel Company, Com	64	68
Mengel Company, Pfd	83	93
Oxford Papers, Com	93	97
Oxford Paper Co., Pfd	98	...
Provincial Paper Co., Com	94	98
Provincial Paper Co., Pfd	99	...
Price Brothers, Cap	39	40
St. Croix Paper	185	215
St. Maurice Paper Co., Cap	83	87
St. Regis Paper Co., Cap	54	56
Spanish River Pulp and Paper, Com	104	105
Spanish River Pulp and Paper, Pfd	115	117
Ticonderoga Pulp and Paper, Cap	145	...
West Virginia Pulp and Paper, Cap	44	47
West Virginia Pulp and Paper, Pfd	95	...
Whittaker Paper, Com	53	...
Whittaker Paper, Pfd	15	...

* Nominal.

Paper

(F. o. b. Mill)

Ledgers	11.00	@38.00
Bonds	9.00	@45.00
Writings—		
Extra Superfine	14.00	@32.00
Superfine	14.00	@32.00
Tub Sized	10.00	@15.00
Engine Sized	8.00	@11.00
News—		
Rolls, contract	3.50	@ 3.90
Rolls, transit	3.75	@ 4.25
Sheets	4.00	@ 4.25
Side Runs	3.25	@ 4.00
Book, Cased—		
S. & S. C.	7.00	@ 9.75
M. F.	6.25	@ 8.75
Coated and Enamel	8.00	@15.00
Lithograph	8.00	@15.00
Tissues—Per Ream		
White No. 1	.70	@ .90
Colored	1.00	@ 2.00
White No. 2	.65	@ .75
Anti-Tarnish	1.25	@ 2.35
Kraft	.85	@ .95
Manila	.70	@ .80
Kraft—		
No. 1 Domestic	5.50	@ 6.25
No. 2 Domestic	4.25	@ 4.50
Imported	5.50	@ 5.75
Manila—		
No. 1 Jute	9.25	@ 9.50
No. 2 Jute	7.75	@ 8.50
No. 1 Wood	4.75	@ 5.25
No. 2 Wood	4.00	@ 4.50
Butchers	3.50	@ 4.00
Fibre Papers—		
No. 1 Fibre	4.50	@ 5.00
No. 2 Fibre	4.25	@ 4.75
Common Bogus	2.50	@ 2.75
S. Screening	3.00	@ 3.50
Card Middler	4.00	@ 5.00
Boards—per ton—		
News	45.00	@47.50
Straw	57.00	@60.00
Chip	42.00	@45.00
Binders' Boards	72.50	@77.50
Sgl. Mla. Ll. Chip	60.00	@62.50
Wood Pulp	70.00	@75.00
Container	62.50	@67.50
Sulphate Screenings—		
Coarse	.75	@ .85
Refined	1.75	@ 2.00
Ground Wood—		
Screenings	20.00	@25.00
Glassine—		
Bleached, basis 25 lbs.	13.00	@16.00
Bleached, basis 20 lbs.	15.00	@16.00

Mechanical Pulp

(Ex-Dock)

No. 1 Imported	33.00	@37.00

(F. o. b. Mill)

No. 1 Domestic	28.00	@32.00

Chemical Pulp

(Ex-Dock, Atlantic Ports)

Sulphite (Imported)—		
Bleached	4.00	@ 4.50
Easy Bleaching	2.90	@ 3.25
No. 1 strong unbleached	2.75	@ 3.25
No. 2 strong unbleached	2.45	@ 2.80
No. 1 Kraft	2.95	@ 3.20
Sulphate—		
Bleached	3.75	@ 3.95

(F. o. b. Pulp Mill)

Sulphite (Domestic)—		
Bleached	3.75	@ 4.50
Easy Bleaching Sulphite	2.90	@ 3.25
News Sulphite	2.55	@ 2.80
Mitscherlich	3.25	@ 3.75
Kraft (Domestic)	2.75	@ 3.25
Soda Bleached	4.00	@ 4.25

Domestic Rags

New Rags

Prices to Mill, f. o. b. N. Y.

Shirt Cuttings—		
New White, No. 1	14.50	@15.25
New White, No. 2	8.00	@10.00
Silesias No. 1	10.50	@11.50
New Unbleached	14.00	@15.00
Washables	6.50	@ 9.25
Fancy	9.75	@10.25
Blue Overall	10.25	@11.25
New Blue Prints	7.50	@ 8.50
New Soft Blacks	5.75	@ 6.20
Mixed Khaki Cuttings	5.75	@ 6.25
Pink Corset Cuttings	10.50	@11.00
Pink Muslin	10.25	@10.75
New Light Seconds	3.25	@ 3.50
O. D. Khaki Cuttings	6.25	@ 7.25
Men's Corduroy	6.25	@ 6.75
New Mixed Blacks	4.00	@ 4.50

Old Rags

White, No. 1—		
Repacked	6.50	@ 7.50
Miscellaneous	6.50	@ 7.00
White, No. 2—		
Repacked	4.50	@ 5.00
Miscellaneous	4.00	@ 4.50
St. Soiled, White	3.00	@ 3.50
Thirds and Blues—		
Repacked	4.00	@ 4.25
Miscellaneous	3.25	@ 3.50
Black Stockings	4.00	@ 4.50
Roofing Rags—		
Cloth Strippings	2.40	@ 2.50
No. 1	2.40	@ 2.50
No. 2	2.30	@ 2.40
No. 3	2.00	@ 2.25
No. 4	2.20	@ 2.30
No. 5A	1.80	@ 1.50

Foreign Rags

New Light Silesias	9.50	@10.50
Light Flannelettes	11.00	@12.00
Unbl'ched Cottons	14.00	@15.00
New White Cuttings	14.00	@15.00
New Light Oxfords	10.00	@11.00
New Light Prints	9.00	@10.00
New Mixed Cuttings	4.25	@ 4.75
New Dark Cuttings	4.00	@ 4.25
No. 1 White Linens	10.00	@11.00
No. 2 White Linens	7.25	@ 8.25
No. 3 White Linens	6.25	@ 6.75
No. 4 White Linens	4.50	@ 5.50
Old Extra Light Prints	4.25	@ 4.75
Ord. Light Prints	3.75	@ 425
Med. Light Prints	3.75	@ 4.25
Dutch Blue Cottons	4.00	@ 4.50
Ger. Blue Cottons	4.00	@ 4.25
Ger. Blue Linens	425	@ 4.75
Checks and Blues	3.50	@ 3.75
Linsay Garments	2.45	@ 2.50
Dark Cottons	2.35	@ 2.45
Shoppery	2.30	@ 2.40
French Blues	4.00	@ 4.50

Bagging

Prices to Mill F. o. b. N. Y.

Gunny No. 1—		
Foreign	3.15	@ 3.25
Domestic	3.15	@ 3.25
Wool Tares, light	2.50	@ 2.60
Wool, Tares, heavy	2.60	@ 2.70
Bright, Bagging	2.55	@ 2.65
Mixed Bagging	2.30	@ 2.40
Sound Bagging	2.10	@ 2.20
Roofing Bagging	1.85	@ 2.00
Manila Rope—		
Foreign	6.25	@ 6.75
Domestic	6.75	@ 7.25
New Bu. Cut	3.60	@ 3.85
Hessian Jute Threads—		
Foreign	4.00	@ 4.25
Domestic	3.25	@ 3.50

Old Waste Papers

(F. o. b. New York)

Shavings—		
Hard, White, No. 1	3.40	@ 3.60
Hard, White, No. 2	3.15	@ 3.40
Soft, White, No. 1	2.70	@ 2.80
Flat Stock—		
Stitchless	1.45	@ 1.55
Overissue Mag	1.25	@ 1.40
Solid Flat Book	1.40	@ 1.50
Crumpled No. 1	1.25	@ 1.35
Solid Book Ledger	1.80	@ 1.90
Ledger Stock	1.40	@ 1.50
New B. B. Chips	.65	@ .75
Manilas—		
New Env. Cut	2.25	@ 2.40
New Cut. No. 1	1.75	@ 2.00
Extra No. 1 old	1.40	@ 1.50
Print	1.20	@ 1.30
Container Board	.70	@ .90
Bogus Wrapper	1.00	@ 1.10
Old Krafts Machine compressed bales	2.00	@ 2.10
News—		
No. 1 White News	1.85	@ 2.00
Strictly Overissue	1.05	@ 1.15
Strictly Folded	.75	@ .85
No. 1 Mixed Paper	.55	@ .65
Common Paper	.35	@ .45

Twines

Cotton—(F. o. b. Mill)—		
No. 1	.42	@ .45
No. 2	.41	@ .43
No. 3	.40	@ .42
India, No. 6 basis—		
Light	.19	@ .20
Dark	.17	@ .19
B. C., 18 basis	.39	@ .41
A. B. Italian, 18 Basis	.56	@ .61

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FITCHBURG - MASSACHUSETTS

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EMPIRE SIZE & CHEMICAL CORP.
ALBANY, NEW YORK

Finished Jute—			
Dark, 18 basis	.30	@	.31
Light, 18 basis	.28	@	.30
Jute Wrapping, 3-6 Ply—			
No. 1	.18	@	.20
No. 2	.18	@	.20
Tube Rope—			
4-ply and larger	.15	@	.17
Fine Tube Yarn—			
5-ply and larger	.20	@	.28
4-ply	.21	@	.24
3-ply	.22	@	.25
Unfinished India—			
Basis	.14	@	.15
Paper Makers' Twine			
Balls	.12	@	.13
Box Twine, 2-3 ply	.14	@	.15
Jute Rope	.20	@	.40
Amer. Hemp, 6	.30	@	.32
Sisal Hay Rope—			
No. 1 Basis	.14	@	.16
No. 2 Basis	.10	@	.12
Sisal Lath Yarn—			
No. 1	.14	@	.15
No. 2	.11	@	.13
Manila Rope	.18	@	.19

CHICAGO

Paper

F. o. b. Mill

All Rag Bond	35	@	40
No. 1. Rag Bon	25	@	35
No. 2 Rag Bond	14	@	25
Water Marked Sulphite	9	@	12
Sulphite Bond	7	@	10¾
Sulphite Ledger	9	@	12
Superfine Writing	18	@	24
No. 1 Fine Writing	14	@	18
No. 2 Fine Writing	12	@	14
No. 3 Fine Writing	9	@	12
No. 1 M. F. Book	5½	@	7½
No. 1 S. & S. C. Book	6	@	7¾
Coated Book	8	@	10
Coated Label	8	@	10
News—Roll, mill	3½	@	4¼
News—Sheets, mill	3¾	@	4½
No. 1 Manila	4½	@	5½
No. 1 Fibre	4¼	@	4½
No. 2 Manila	3¾	@	4¼
Butchers' Manila	3.60	@	4.00
No. 1 Kraft	5¾	@	6¼
No. 2 Kraft (Southern Grade)	4	@	4½
No. 2 Kraft (Northern Grade)	4¾	@	5
Wood Tag Boards	4	@	6
Sulphite Screenings	2.75	@	3.00
Manila Tissue, 24x36 sheet	7	@	7½
White Tissue, 20x30 sheet	7	@	7¾
Boards, per ton—			
(Delivered Central Territory)			
Plain Chip	45.00	@	47.50
Solid News	47.50	@	50.00
Manila Line Chip	57.50	@	60.00
Container Lined—			
(Delivered Central Territory)			
85 Test	—	@	75.00
100 Test	—	@	80.00

Old Papers

F. o. b. Chicago

Shavings—			
No. 1 Hard White	3.15	@	3.25
White Envel. Cuttings	3.15	@	3.25
No. 1 Soft Shav.	2.65	@	2.75
No. 1 Mixed	1.45	@	1.50
No. 2 Mixed	1.15	@	1.20
Ledger and Writings	1.50	@	1.55
Solid Books	1.40	@	1.45
No. 1 Light Books	1.00	@	1.05
Blanks	1.90	@	1.95
Kraft	2.05	@	2.10
New Kraft Cuts	2.30	@	2.35
Manila Envelope Cuttings	2.40	@	2.50
Ex. No. 1 Manila	2.00	@	2.10
Print Manila	.90	@	.95
Folded News (overissue)	.85	@	.90
Old Newspapers—			
No. 1	.70	@	.75
No. 2	.60	@	.65
Mixed Papers—			
No. 1	.55	@	.60
No. 2	.50	@	.55
Straw Clippings	.75	@	.80
Binders' Clippings	.70	@	.65
Roofing Stock, f. o. b. Chicago, Net Cash—			
No. 1	47.00	@	52.00
No. 2	45.00	@	50.00
No. 3	43.00	@	48.00
No. 4	41.00	@	46.00

BOSTON

Paper

Ledgers—			
Sulphite	.08½	@	.18
Rag content	.18	@	.36½
All Rag	.38	@	.50
Bonds—			
Sulphite	.08½	@	.12
Rag Content	.17	@	.45
All Rag	.36½	@	.51
Writings	.08	@	.20
Superfines	.22	@	.50
News	.04	@	.04½
Book, Super	.08	@	.10
Book, Coated	.09	@	.14
Coated Litho	.09½	@	.15
Label	.09½	@	.15
Jute Manila No. 1	.11	@	.12
Manila, Sul. No. 1	.05	@	.05
Manila, Sul. No. 2	.03½	@	.04½
No. 1 Kraft	.06¼	@	.06½
No. 2 Kraft	.05½	@	.05½
Common Bogus	.03½	@	.04
Straw Board	—	@	50.00
News Board	—	@	45.00
Chip Board	—	@	42.50
Single Manila Pulp lined board	55.00	@	60.00
Single White, patent coated board	75.00	@	82.50
Wood Pulp Board	80.00	@	85.00
Binder Boards	75.00	@	85.00
Tarred Felts—			
Regular	61.00	@	63.00
Slaters	66.00	@	68.00
Best Tarred, 1 Ply, roll	1.50	@	1.60
Best Tarred, 2 Ply, roll	1.70	@	1.80
Best Tarred, 3 Ply, roll	2.00	@	2.10

Old Papers

Shavings—			
No. 1 Hard White	4.00	@	3.75
White Blank News	1.75	@	2.00
Manila Env. Cuttings	2.80	@	3.00
No. 2 Hard White	3.25	@	3.50
No. 1 Soft White	.04½	@	—
No. 2 Soft White	.03¾	@	—
No. 1 Mixed	1.60	@	1.75
No. 2 Mixed	1.25	@	1.50
Solid Ledger Stock	2.00	@	1.75
Writing Paper	—	@	1.50
No. 1 Books, Heavy	1.75	@	1.50
No. 1 Books, Light	—	@	1.25
No. 1 New Manila	2.50	@	2.60
No. 1 Old Manila	1.75	@	2.00
Print Manila	1.05	@	1.20
Old Kraft	2.00	@	2.25
Overissue News	1.00	@	6.54
Old Newspapers	.70	@	5.54
No. 1 Mixed Paper	.60	@	.47½
Box Board, Chip	.60	@	.50

Bagging

Price f. o. b. Boston

Gunny No. 1—			
Foreign	—	@	3.00
Domestic	—	@	3.25
Manila Rope	6.00	@	6.50
Mixed Rope	1.50	@	2.25
Scrap burlaps	—	@	2.25
Wool Tares, heavy	—	@	3.00
Mixed Strings	—	@	2.25
New Burlap Cuttings	—	@	3.75

Domestic Rags (New)

Price f. o. b. Boston

Shirt Cuttings—			
New White No. 1	.13½	@	.15
Silesias, No. 1	.11	@	—
New Unbleached	.14½	@	.15
Washable	.07½	@	.08
Fancy	.10½	@	—
Cottons—According to Grades—Blue—			
Blue overalls	.12½	@	—
New Black, soft	.07	@	—
Khaki Cuttings	.07	@	—
Corduroy	.04	@	.05
New Canvas	.12	@	.12½

Domestic Rags (Old)

Price f. o. b. Boston

White No. 1	10.00	@	—
Repacked	9.50	@	—
Miscellaneous	8.50	@	—
White No. 2—			
Repacked	6.50	@	—
Miscellaneous	5.25	@	—
Thirds and Blues—			
Repacked	5.00	@	—
Miscellaneous	3.50	@	—
Roofing Stock—			
No. 1	3.00	@	—
No. 2	3.00	@	—
No. 3	2.50	@	—
No. 4	2.00	@	—

PHILADELPHIA

Paper

Bonds	.07	@	.40
Ledgers	.11	@	.40
Writings—			
Superfine	.13	@	.18
Extra fine	—	@	.22
Fine	.20	@	.26½
Fine, No. 2	.16	@	.25
Fine, No. 3	.12	@	.20
Book, M. F.	.06	@	.07
Book, S. S. & C.	.06	@	.07½
Book, Coated	.11	@	.16
Coated Lithograph	.09	@	.12
Label	.09	@	.12
News	.03½	@	.04
No. 1 Jute Manila	.09½	@	—
Manila Sul., No. 1	.04½	@	.06
Manila No. 2	.04	@	.04½
No. 2 Kraft	.05	@	.05½
No. 1 Kraft	.06¼	@	—
Common Bogus	.02¾	@	—
Straw Board	56.00	@	55.00
News Board	42.50	@	—
Chip Board	42.50	@	—
Wood Pulp Board (Carload Lots)	4.50	@	5.00
Binder Boards—			
Per ton	75.00	@	80.00
Carload lots	65.00	@	70.00
Tarred Felts—			
Regular	61.00	@	63.00
Slaters	66.00	@	68.00
Best Tarred, 1-ply (per roll)	1.70	@	1.80
Best Tarred, 2-ply (per roll)	1.50	@	1.60
Best Tarred, 3-ply	2.00	@	2.10

Bagging

F. o. b. Phila.

Gunny, No. 1—			
Foreign	3.00	@	3.25
Domestic	3.00	@	3.25
Manila Rope	4.75	@	6.00
Sisal Rope	2.50	@	—
Mixed Rope	1.00	@	1.25
Scrap Burlaps	2.25	@	2.50
Wool Tares, heavy	2.00	@	2.13
Mixed Strings	1.25	@	—
No. 1, New Lt. Burlap	3.50	@	3.75
New Burlap Cuttings	3.75	@	—

Old Papers

F. o. b. Phila.

Shavings—			
No. 1 Hard White	3.50	@	3.60
No. 2 Hard White	3.00	@	3.25
No. 1 Soft White	2.50	@	2.60
No. 2 Soft White	1.75	@	—
No. 1 Mixed	1.00	@	1.10
No. 2 Mixed	.90	@	1.00
Solid Ledger Stock	1.75	@	1.90
Writing Paper	1.60	@	1.65
No. 1 Books, heavy	1.25	@	—
No. 2 Books, light	1.00	@	—
No. 1 New Manila	1.50	@	1.75
No. 1 Old Manila	1.25	@	1.50
Container Manila	.85	@	.90
Old Kraft	2.00	@	2.10
Over issue News	.90	@	.95
Old Newspaper	.40	@	.50
No. 1 Mixed Paper	.40	@	.50
Common Paper	.30	@	.35
Straw Board, Chip	.60	@	.65
Binders Bd., Chip	.60	@	.65

Domestic Rags—New.
Price to Mill, f. o. b. Phila.

Shirt Cuttings—			
New White, No. 1	.13½	@	.14
New White, No. 2	.06½	@	—
Silesias, No. 1	.10½	@	.11
New Unbleached	.14	@	.14½
Washable	.07¾	@	.08¼
Fancy	.09½	@	.10
Cottons—according to grades—			
Blue Overall	.11	@	.11½
New Blue	.04	@	.04¼
New Black Soft	.06	@	.06¼
New Light Seconds	.03½	@	.03¾
Khaki Cuttings	.06½	@	.07
Corduroy	.04	@	.04½
New Canvas	.08¾	@	.09
New Black Mixed	.05	@	.05½

Old

White, No. 1—			
Repacked	6.75	@	7.00
Miscellaneous	6.25	@	6.50
White, No. 2—			
Repacked	.05	@	.05½
Miscellaneous	.04¾	@	.05
Thirds and Blues—			
Repacked	3.75	@	4.00
Miscellaneous	3.15	@	3.25
Black Stockings	4.25	@	4.50
Roofing Stock—			
No. 1	2.00	@	2.15
No. 2	1.90	@	2.00
No. 3	1.25	@	1.35
No. 4	1.10	@	1.20
No. 5A	1.10	@	1.15
B	1.05	@	1.10
C	1.00	@	1.05

TORONTO

Paper

(Mill Prices to Jobbers f. o. b. Mill)

Bond—			
Sulphite	.10½	@	.12½
Light tinted	.11	@	.13¼
Dark tinted	.12½	@	.15
Ledgers (sulphite)	—	@	.13
Ledgers No. 1	.36	@	—
Ledgers No. 2	.27	@	—
Writing	.09¼	@	
Writing S. C.	.10	@	
News f. o. b. Mills—			
Rolls (carloads)	3.50	@	—
Sheets (carloads)	—	@	4.25
Sheets (2 tons or over)	—	@	4.60
Book—			
No. 1 M. F. (carloads)	8.00	@	—
No. 2 M. F. (carloads)	7.50	@	—
No. 3 M. F. (carloads)	7.00	@	—
No. 1 S. C. (carloads)	8.50	@	—
No. 2 S. C. (carloads)	8.00	@	—
No. 3 S. C. (carloads)	7.50	@	—
No. 1 Coated and litho	14.50	@	—
No. 2 Coated and litho	13.50	@	—
No. 3 Coated and litho	12.75	@	—
Coated tinted	.15	@	—
Wrapping—			
Rag Brown	4.75	@	—
White Rag	5.25	@	—
"B" Manila	5.50	@	—
No. 1 Manila	6.50	@	—
Fiber	6.50	@	—
Kraft, M. F.	7.00	@	—
M. G.	7.15	@	—

Pulp

(F. o. b. Mill)

Ground wood	29.00	@	30.00
Sulphite easy bleaching	60.00	@	65.00
Sulphite news grade	55.00	@	58.00
Sulphite, bleached	75.00	@	80.00
Sulphate	62.50	@	65.00

Old Waste Paper

(In carload lots, f. o. b. Toronto)

Shavings—			
White Env. Cut	3.60	@	—
Soft White Book shavings	3.25	@	—
White Blk. News	1.70	@	—
Book and Ledger—			
Flat Magazine and Book Stock (old)	1.25	@	—
Light and Crumpled Book Stock	1.10	@	—
Ledgers and Writings	1.40	@	—
Solid Ledgers	1.40	@	—
Manilas—			
New Manila Cut	—	@	1.60
Printed Manilas	1.00	@	—
Kraft	2.10	@	2.10
News and Scrap—			
Strictly Overissue	.80	@	—
Folded News	.80	@	—
No. 1 Mixed Papers	.55	@	—
Domestic Rags—			
Price to mills, f. o. b. Toronto	Per lb.		
No. 1 White shirt cuttings	.15	@	.15½
No. 2 White shirt cuttings	.08	@	.08½
Fancy shirt cuttings	.09½	@	.10
No. 1 Old Whites	—	@	—
Third and blues	.05½	@	.05¾